INSTRUCTION MANUAL

NOVA
DVR 2024™
WOOD LATHE

Teknatool INTERNATIONAL

116-0712-006

Models
1) 57080 spindle thread 1 1/4" x 8 TPI 220v (USA)
2) 57081 spindle thread 1 1/4" x 8 TPI 220v (Aus/NZ)
3) 57082 spindle thread 1 1/4" x 8 TPI 220v (UK)
4) 57083 spindle thread M33x3.5 220v (Europe)

NOVA **DVR 2024** Lathe Features at a glance

DVR Electronic drive

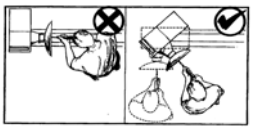
The Nova DVR lathes are unique. The DVR incorporates the motor built as part of the headstock, the spindle and motor are one unit. The motor is almost maintenance free and designed with high reliability. The Digital Variable Reluctance motor uses smart motor technology to provide an incredibly smooth and powerful drive. This drive takes turning to a new level. The controller monitors the spindle position constantly and maintains spindle speed very closely. Additional power is added as it senses extra load from the tool.

Add on Bed System

A lathe that meets your woodturning needs your workshop space, and your pocket! Each segment is 20" or 510mm in length. This feature appeals for many different reasons:

As a compact lathe (standard configuration) it is great for small turning workshop spaces.

- As an extended lathe for those wanting to do extra long spindles (beyond the traditional between center of most lathes) the Nova DVR 2024 delivers big turning capacity.
- As a bowl lathe for those just wanting to turn bowls.



Sophisticated Swivel Head

Swivel head lathes have many advantages:

• Space saving

• Allows the turner (not the machine!) to decide the most comfortable position for your turning (saving you from backstrain)

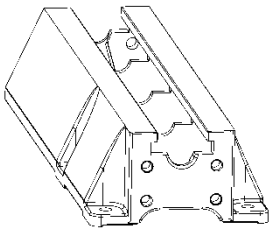
• Elimination of left-hand 'outboard' turning techniques and no extra outboard chucks and faceplates are necessary.

There are a number of swivel head lathes available, but Nova DVR have by far the most sophisticated, accurate and easy to use swivel head on the market.

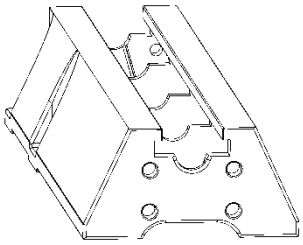
The Nova DVR lathes can be easily and quickly swiveled to any position (360 degrees). It can be solidly locked in any position plus it has the added security of a detent pin lock at 0,22.5,45,90 degrees plus 315 (for left-hand use).
The swivel head turns, locks easily and has a very accurate detent position, to lock the spindle in line with the tailstock. The combination of rigid Tailstock construction and detent pin delivers superb accuracy and is unique to the Nova DVR .

Solid Construction

Well proven design, the Nova DVR 2024 is made from Cast Iron components for strength and rigidity. Added features like special webbed bed design makes the lathe well equipped to take heavy turning stresses. The bed has been designed with vibration dampening qualities - a solid 1/2" cross rib is positioned along the bed unit, quickly dissipating any vibration as it travels down the bed. The new powerful trapezoidal bed design delivers even more vibration damping properties. All this combined with cosmetically appealing, smooth flowing lines.



Bed Extension Segment



Main Bed Segment

Cast iron has always been the material of choice for Woodlathe construction for its inherent mass and an excellent modulus of vibration.

New 10 Favourite Speeds Function

Pre-program your most favourite speeds for easy retrieval.

Trapezoidal Bed Design

Powerful with smooth flowing lines, Nova bed design delivers even more vibration dampening properties.

New Headstock Design

One piece design increases strength and vibration dampening properties. Micro analysed for optimum design. Same popular swivel headstock as used in the older DVR and 3000 Lathe models, saves strain on your back.

Adaptive Control Software

Smart adaptive computer technology actually measures the weight of the work piece and adjusts its performance accordingly.

Safety Sensing Feature

Intelligent DVR computer controller senses abnormal turning conditions e.g. a chisel dig in or index left engaged – and instantaneously shuts down power to the spindle. Normal safety precautions would still apply – see pages 7-8.

Energy Efficient

Unlike other ‘dumb’ electric motors, the Smart DVR Motor only inputs enough power to maintain the set speed – giving you potential for power savings over conventional motors.

Wide Speed Range

100-5000 rpm, easy push button speed change.

DVR Direct Drive Motor

Driven by unique Direct Drive Variable Reluctance Motor Technology, with superior performance over AC or DC motors. Proven technology, many thousands of users. No power loss through belts or transmission. Provides digital electronic push button variable speed with no belt changes.

Ultra Smooth Cutting Power

Selected RPM is closely maintained and the DVR has no belt stretch or motor bounce which affects smooth cutting. The DVR motor runs smooth with almost no vibration.

5 Year Warranty (limited)

On all castings, mechanical parts and components. 2 Year Warranty on all electronics and electrical components.

Plug and Play

Just bolt to stand or bench, plug it in and you are turning! No complex motor set ups or adjustments.

Low Mantainence

The motor is simple, brushless with no rotor windings (rotor is solid steel). The industrial grade electronics are built to last. There are no drive pulleys or belts to set up or come loose.

Welcome

Thank you for choosing our NOVA DVR 2024 Wood Lathe and welcome to the Teknatool product family. Your choice shows you want the best for your woodturning and you recognize the superb DVR drive technology and the host of other unique features the Nova DVR offers.

We strive to achieve the best value for your money – providing quality, innovative features, a wide range of accessories – plus comprehensive, ongoing support (latest manuals downloadable from our website, newsletters, projects etc). We are only a phone call or email away with technical advice or assistance on the operation of your lathe or your woodturning queries.

Please feel free to contact us about any aspect of our products or service – we regard our customers as our best development and improvement team – we would love to hear from you!

Once again, welcome to the "Teknatool NOVA Family". We trust that you enjoy our products and hope they enhance the pleasure you experience from the wonderful craft of wood turning!

Best Regards

Brian Latimer
Marketing Director
Teknatool International Ltd

Contact Teknatool

New Zealand

Teknatool International Ltd

Phone: (+64) 9 477 5600

Fax: (+64) 9 477 5601

Email: service@teknatool.com

Website: www.teknatool.com

Carba-Tec NZ Ltd

Free Phone: 0800-444-329
Phone: 274-9454
Website: www.carbatec.co.nz

United States

Teknatool Service Center

Phone: 727-954-3433
Fax: 727-623-0902

Email: service@teknatool.com

Website: www.teknatool.com

Woodcraft Supply Corp

Technical Service: 1-800-535-4486

Orders: 1-800-225-1153

Website: www.woodcraft.com

Australia

Carbatec Australia

Phone: +61 7 3397 2577

Free Fax: +61 7 3390 5280

Email: sales@carbatec.com.au

Website: www.carbatec.com.au

Canada

KMS Tools and Equipment Ltd

Phone: (+1) 604-522-5599

Free Phone: 1-800-567-8979

Fax: (+1) 604-522-0638

Email: kmstools@kmstools.com

Website: www.kmstools.com

Netherlands

Baptist voor Houtbewerkers

Tel: 026 445 16 44

Website: http://www.baptist.nl

United Kingdom

Record Power

Phone: (+44) 0870 770 1777

Fax: (+44) 0870 770 1888

Website: www.recordpower.co.uk

Austria

Neureiter

Phone:+43 6244 202 99

Fax: +43 6244 202 9910

Email: kontakt@neureiter-maschinen.at

France

OTELO

Phone: 0.800 33 11 11

Fax: 01 39 72 16 60

Website: www.otelo.fr

MAISON DU TOURNAGE

Phone: +33-467-232-852

Fax +33-467-230-038

Email: relations.maison.du.tournage@wanadoo.fr

Norway

WWW VERKTOY AS

Phone: 0047-51-88-68-00

Fax: 0047-51-88-68-10

Email: post@verktoyas.no

Website: www.verktoyas.no

Belgium

Willy Vanhoutte BVBA

Phone +32 (50) 78 17 94

Fax + 32 (50) 78 19 64

Email: info@willyvanhoutte.be

Website: http://www.willyvanhoutte.beSouth Africa

The Hardware Centre

Phone: (27) 011 791 0844

Fax: (27) 011 791 0850

Website: www.hardwarecentre.co.za

Email: info@hardwarecentre.co.za

Table of Contents

GENERAL SAFETY RULES **7**
ADDITIONAL SAFETY RULES FOR WOOD LATHES **8**
DVR 2024 Wood Lathe Specifications **9**
Workshop Requirements 10
Assembling the Nova DVR 2024 ..... **11**
Nova DVR Components After Unpacking **11**
Adding an Extension Bed 12
Mounting the lathe to the Cast Iron Stand 13
Mounting the Skirt to the Stand 16
Connecting to Power 17
Using the NOVA DVR 2024 ..... **18**
DVR Drive Functions 19
Turning Tips 21
Swiveling the Headstock 22
Spindle Index 23
Headstock 23
Spindle Thread Size **23**
Toolrest 25
Tailstock 26
Learning Turning 27
CONTROLLER USER'S GUIDE **28**
Programming the Favorite Speeds 33
Maintaining the NOVA DVR 2024 ..... **36**
General Maintenance 36
Cleaning the Toolslide 37
Cleaning the Tailstock 37
Aligning the Tailstock 38
Troubleshooting Guide **39**
Troubleshooting Guide continued **41**
NOVA DVR 2024 Wood Lathe Parts List **42**
Accessories **45**
Accessories **46**
Index **48**
Teknatool Warranty **49**

© Copyright 2001-2012 by Teknatool International; All Rights Reserved.
Nova DVR is a trademark of Teknatool International Ltd.

The information and specifications contained herein are subject to change. Teknatool is not responsible for errors or omissions herein or for incidental damages in connection with the furnishing or use of this information.

GENERAL SAFETY RULES

Warning! Failure to follow these rules may result in serious personal injury.

1. **FOR YOUR OWN SAFETY, READ THE MANUAL BEFORE OPERATING THE TOOL.** Learn the machine's application and limitations plus the specific hazards particular to it.
2. **ALWAYS USE A FULL FACE SHIELD- Strongly recommended** (must comply with ANSI STANDARD Z87.1 -USA) Everyday eye-glasses usually are only impact resistant and safety glasses only protect eyes. A full face shield will protect the eyes and face. Also use face or dust mask if cutting operation is dusty.
3. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry which may get caught in moving parts. Non slip footwear is recommended. Wear protective hair covering to contain long hair.
4. **USE EAR PROTECTORS.** Use ear muffs for extended period of operation. Use muffs rated to 103 DBA LEQ (8 hour).
5. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted. The DVR Lathe is intended for indoor use only. Failure to do so may void the warranty.
6. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents. Build up of sawdust is a fire hazard.
7. **KEEP CHILDREN AND VISITORS AWAY.** The Nova DVR is **not recommended** for children and infirm. Such personnel and onlookers should be kept a safe distance from work area.
8. **MAKE WORKSHOP CHILDPROOF** with locks, master switches, or by removing starter keys.
9. **GROUND ALL TOOLS.** If the tool is equipped with a three prong plug, it should be plugged into a three hole electrical receptacle. If an adapter is used to accommodate a two prong receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.
10. **MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY** while the motor is being mounted, connected, or reconnected.
11. **DISCONNECT TOOLS from wall socket** before servicing and when changing accessories such as blades, bits, cutters and fuses etc.
12. **AVOID ACCIDENTAL STARTING.** Make sure switch is in the Off position before plugging in power cord.
13. **NEVER LEAVE MACHINE RUNNING UNATTENDED.** Do not leave machine unless it is turned off and has come to a complete stop.
14. **KEEP GUARDS IN PLACE** and in working order.
15. **USE CORRECT TOOLS.** Do not use a tool or attachment to do a job for which it was not designed.
16. **USE RECOMMENDED ACCESSORIES.** The use of improper accessories may cause hazards.
17. **DON'T FORCE THE TOOL.** It will do the job better and be safer at the rate for which it was designed.
18. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
19. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
20. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form a habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
21. **DON'T OVERREACH.** Keep proper footing and balance at all times.
22. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
23. **ATTENTION TO WORK.** Concentrate on your work. If you become tired or frustrated, leave it for awhile and rest.
24. **SECURE WORK.** Use clamps or a vice to hold work when practical. It's safer than using your hand and frees both hands to operate tool.
25. **CHECK DAMAGED PARTS.** Before further use of the tool, any part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, mounting, and any other conditions that may affect its operation. Any damaged part should be properly repaired or replaced.
26. **DRUGS, ALCOHOL, MEDICATION.** Do not operate machine while under the influence of drugs, alcohol, or any medication.
27. **DUST WARNING.** The dust generated by certain woods and wood products can be harmful to your health. Always operate machinery in well-ventilated areas and provide means for proper dust removal. Use wood dust collection systems whenever possible.

ADDITIONAL SAFETY RULES FOR WOOD LATHES

Warning! Failure to follow these rules may result in serious personal injury**.**
Important: ALWAYS BEFORE SWITCHING SPINDLE ON, CHECK SCREEN FOR CORRECT SETTING

1. **DO NOT MODIFY OR USE LATHE FOR USES OTHER THAN FOR WHICH IT WAS DESIGNED.**
2. **SEEK INSTRUCTION.** If you are not thoroughly familiar with the operation of woodlathes, obtain advice from your supervisor, instructor, or other qualified person. Instruction from a qualified person is strongly recommended.
3. **DO NOT OPERATE LATHE** until it is completely assembled and installed. Follow instructions and recommendations.
4. **FOLLOW ELECTRICAL CODES.** Make sure wiring codes and recommended electrical connections are followed and that the machine is properly grounded.
5. **WHEN REPLACING THE FUSE** (on relevant models), completely isolate power when removing the fuse. It is imperative the plug is removed from the mains supply before the fuse is removed. Replace fuse cap before reconnecting to mains.
6. **DVR ; Do not open the switch and rear covers**. Components can carry dangerous voltages even when isolated from mains power.
7. **DVR ; Always ensure spindle fixtures (e.g. faceplates etc) are locked to spindle in case spindle reverse is engaged.** Otherwise they will unwind from spindle. See "Mounting a Faceplate to a chuck" section.
8. **WHEN SPINDLE REVERSE IS ENGAGED DO NOT USE CHISELS OR CUTTING TOOLS - USE FOR SANDING ONLY**
9. **KEEP WORK AREA CLEAN.** Do not turn the lathe on before clearing the lathe of all objects (tools, scraps of wood, etc.). Keep the nearby area and floor clear of debris.
10. **CHECK SET-UP** with spindle Off. Examine the set-up carefully and rotate the work piece by hand to check clearance and check speed is correctly selected before turning on spindle.
11. **DO NOT MAKE ADJUSTMENTS** when the lathe or work piece is turning. Make all adjustments with power Off.
12. **TIGHTEN ALL CLAMP HANDLES** on the headstock, tailstock, and toolrest before operating lathe.
13. **EXAMINE WORK PIECE** and glue joints before turning to make sure it has no defects that would cause it to break when turning.
14. **DVR ; ALWAYS CHECK CORRECT SPEED IS SELECTED BEFORE SWITCHING ON SPINDLE**
15. **USE LOWEST SPEED** when turning a new or unbalanced work piece.
16. **TURN AT RECOMMENDED SPEED.** Always operate the lathe at the recommended speeds. Consult this manual for suggested speeds.
17. **ADJUST TOOLREST** close to the work piece. Before turning, revolve the stock by hand to make sure it clears the rest. At intervals, stop the lathe and readjust the toolrest.
18. **KEEP TOOL ON TOOLREST.** The lathe tool or chisel should be on the toolrest before the lathe is turned On. Tools should remain on the toolrest whenever the tool is engaged in contact with the work piece **REMOVE TOOLREST** when sanding or polishing so fingers do not get pinched.
19. **USE CORRECT LATHE TOOLS.** Do not use spindle turning chisels for faceplate mounted work, and vice versa. Spindle turning tools used for faceplate mounted work may grab the work piece and pull the chisel from your control.
20. **WHEN ROUGHING STOCK** do not jam the lathe tool or chisel into work piece or take too big a cut.
21. **DO NOT POUND WORK PIECE** into headstock drive (spur) center when turning between centers. Pound the drive center into the work piece with a soft mallet before installing it between centers in the lathe.
22. **DO NOT USE TAILSTOCK** to drive work piece into the drive (spur) center when turning between centers. Secure work between centers with light pressure from the tailstock quill action.
23. **FASTEN STOCK SECURELY BETWEEN CENTERS.** Make sure the tailstock is locked before turning on the power.
24. **NEVER LOOSEN TAILSTOCK** SPINDLE or tailstock while work piece is turning.
25. **CORRECT USE OF FACEPLATE.** When faceplate turning, make sure work piece is securely fastened to the faceplate and that appropriate size faceplate is used to support the work piece. Any screw fasteners must not interfere with the turning tool at the finished dimension of the work piece. Rough-cut the work piece as close as possible to finished shape before installing on faceplate.
26. **DO NOT OPERATE LATHE IF DAMAGED OR FAULTY.** If any part of your lathe is missing, damaged or broken, in any way, or any electrical component fails, shut off the lathe and disconnect the lathe from the power supply. Replace missing, damaged, or failed parts before resuming operation.
27. **ADDITIONAL SAFETY INFORMATION** regarding the safe and proper operation of this product is available from the National Safety Council, 444 N. Michigan Avenue, Chicago, IL 60611 in the Accident Prevention Manual of Industrial Operations and also in the Safety Data Sheets provided by the NSC. Also refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S Department of Labor OSHA 1910.213 Regulation.

Guidelines to symbols used in this manual:

Warning Symbol. Pay close attention!

Note/Information Symbol. Please read - important information for you.

DVR 2024 Wood Lathe Specifications

Size: 1100mm(L) x 240mm (W) x 412mm(H)
43 1/3"(L) x 9 1/2" (W) x 16 1/4"(H)

Weight: 88kg (194 LB) + Legs

Swing Over Bed: 508mm (20in.)

Distance Between Centers: 600mm (24in.); extendable in 510mm (20in.) units with add-on Bed sections.

Swing Outboard: 798mm (31in.) with headstock at 90° using outrigger toolrest.

Headstock:
Spindle Thread: M33 x 3.5 RH (1) or
1-1/4 x 8 TPI RH (2)
Headstock Bore: No. 2 Morse Taper (#2 MT)
Headstock Swivel: 0 to 360 degrees, with detents at 0, 22.5, 45, and 90 degrees.
Outboard End Internal Thread: M20 x 1.5 LH
Spindle Index: 24 divisions (every 15 degrees)
15mm through-hole through Headstock

Tailstock:
Tailstock Bore: No. 2 Morse Taper (#2 MT)
Quill Travel: 85mm (3-1/4in.)
Hole Through Tailstock: 12mm (7/16in.)

Toolrest:
Length: 300mm (12in.)
Shaft Diameter: 25.4mm (1in.)

Speeds (rpm):
100 – 5000 (in 5rpm increments)

Favourite Speeds:

10 presets

Standard Equipment:
300mm (12in.) Toolrest, 150mm (6in.) Faceplate, Spur Center, and Live Center. Outboard Handwheel, Cast Iron Stand, NOVA DVR Wireless Remote.

Optional Accessories:
Precision Midi Chuck
G3 Chuck
SuperNova 2 Chuck
Titan^{II} Chuck
80mm (3in.) Faceplate
100mm (4in.) Toolrest
Bowl Toolrest
Outrigger Toolrest Unit
Revolving Center System
Faceplate rings

Swing Away Bed Unit

Notes:
(1) Applicable to Europe (excluding the UK)
(2) Applicable to United States, Canada, United Kingdom, Australia, New Zealand & South Africa.

CE **For Europe, Australasia, UK and South Africa**

CZ157 FC

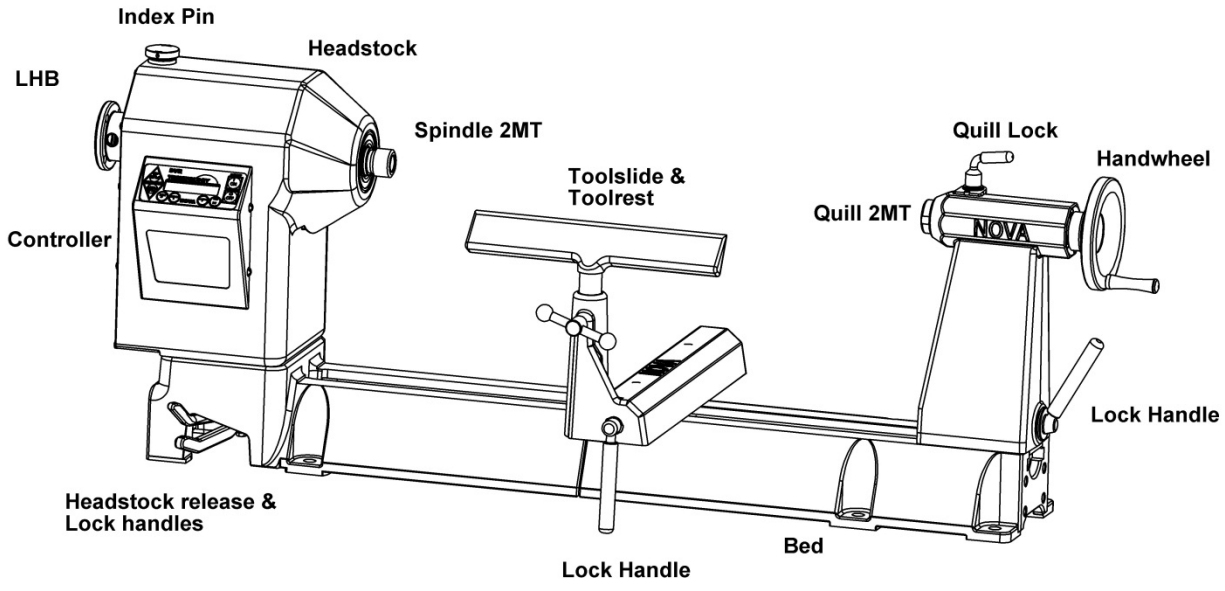
Directives this equipment complies with:
Low voltage directive (LVD) 73/23/EEC + 93/68/EEC+2006/95/EC
Machinery directive (MD) 89/392/EEC + 91/368 EEC + 93/68/EEC+2006/42/EC

Electromagnetic compatibility directive (EMCD) 89/336/EEC + 92/31/EEC + 93/68/EEC+2004/108/EC

Harmonized Standards applied in order to verify compliance with Directives:
EN 61029-1:2009 Low Voltage Directive and Machinery Directive
EN 55014-1:2007
EN 55014-2:2009
EN 61000-3-2:Ed3 2006
EN 61000-3-3:1995 A1 + A2

Signed……..Dated 10/10/11

Nathan Stantiall
Development Manager



Setting Up Your Workshop

Workshop Requirements

Consideration	*Recommendation*
Lathe location	Locate the Nova DVR 2024 close to a power source in an area with good lighting. Leave enough clearance on all sides of the lathe; allow for clearance when the headstock is swiveled. Other machines in your shop should not interfere with the operation of the lathe.
Lighting	Your shop should have adequate lighting. The work area of the lathe should be well lit; there should not be shadows cast on your work. If possible, locate near a window. A portable spotlight may be helpful.
Electrical	The Nova DVR 2024 requires the appropriate power outlet nearby to power the motor. Wiring and outlets should adhere to local electrical codes. If in doubt, seek advice from an electrician. Minimize use of extension cords. See "Connecting to power" section for Surge Protector requirements.
Ventilation	Your shop should be adequately ventilated. The degree of ventilation will vary based on the size of the shop and the amount of work done. The use of dust collectors and filters will minimize risks to your health.

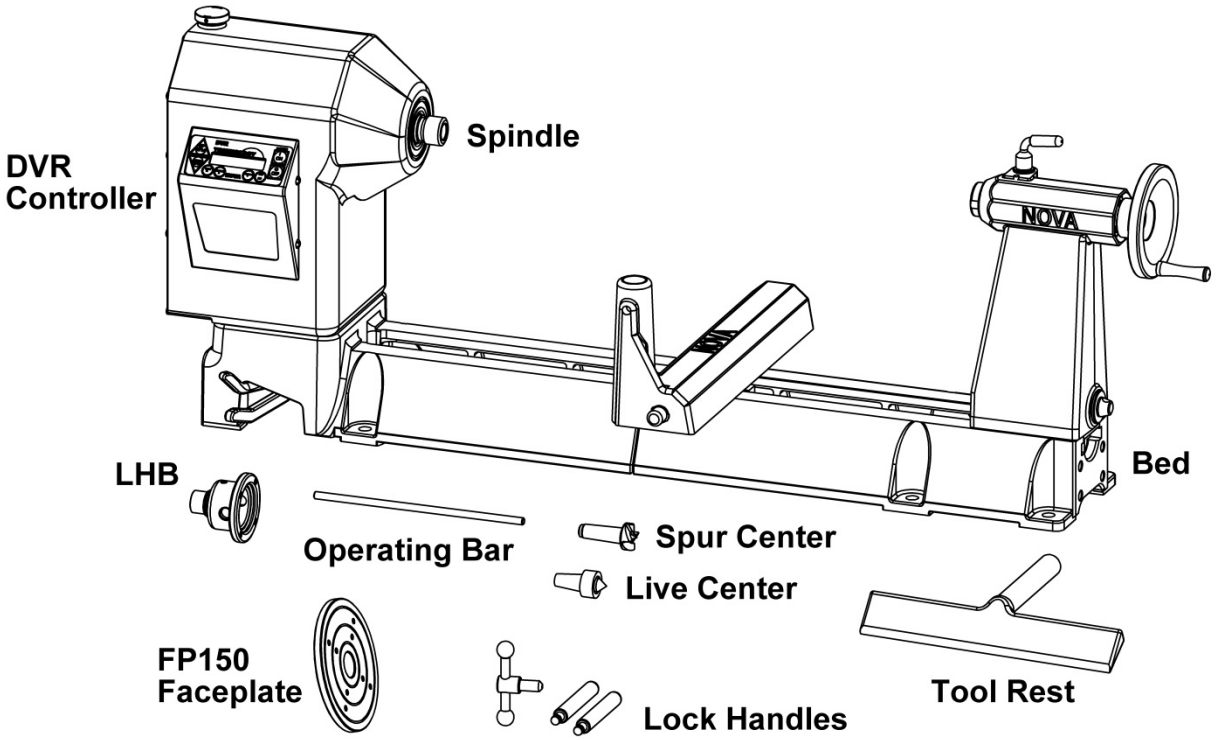
Assembling the Nova DVR 2024

1. Unpack the lathe and components from the shipping container. This is best done by cutting down the sides of the box to expose the lathe

   Warning!
   Have other people help when moving or lifting the Nova DVR 2024 Woodlathe; it weighs 146.2kg (322.3 LB) including stand.

2. Clean any parts coated with rust preventative with a cloth moistened with a petroleum-based solvent or cleanser, such as paint thinner. Coat the lathe bed with paste wax.

Nova DVR Components After Unpacking



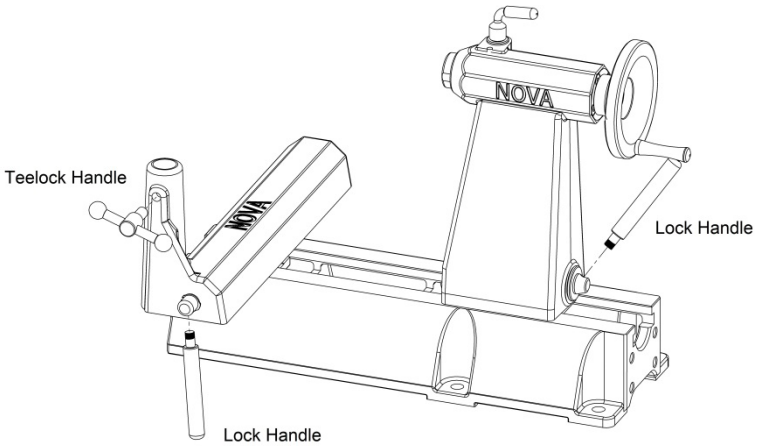
5. Assemble the handles:

ⓘ *Note: Some handles may come pre-assembled*.

Toolrest Clamp Handle - insert the rod through the handle and screw the ball knobs onto each end of the rod.

Toolslide Clamp Handle - screw the rod lock handle into the Toolslide. use a hex spanner to lock handle firmly in thread.

Tailstock Clamp Handle - screw the lock handle into the tailstock. Use a hex spanner to lock handle firmly in thread.



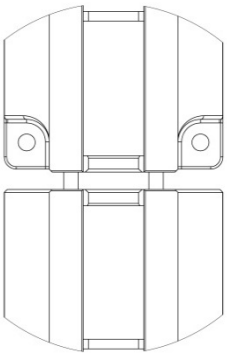
Adding an Extension Bed

Each cast iron extension bed adds 510mm (20in.) to the lathe's capacity to turn between centers.

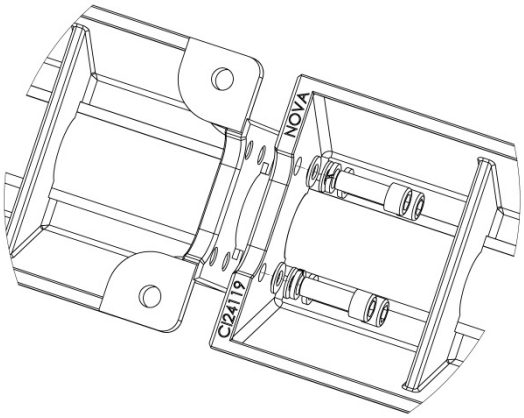
1. Ensure that the bed pieces are flat and the two faces of the bed (which are to be mated) are clean, free of any burrs and dents.

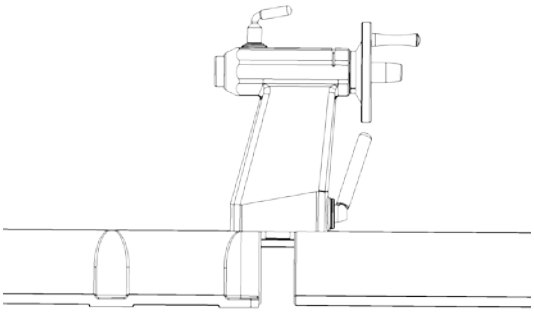
   Note: The end of the extension bed with no feet should be mated to the lathes end face. Also, wipe off any yellow rust protective, dirt etc (if applicable).

2. Place the add on bed extension close to the lathes end face, align the holes and screw on the four M12 cap screws (with one spring washer and flat washer on each) into the four tapped holes with the help of the 10mm Allen key provided.



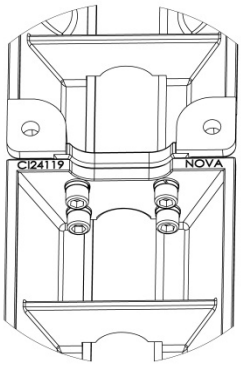
Do NOT fully tighten the cap screws at this stage, but tighten enough so that the add on bed extension is secured





3. Move the tailstock over the two joining extension beds (tailstock approximately covering equal length on either extension). Lock the tailstock firmly over the joining faces

4. Now, use the 10mm Allen key to fully tighten all four cap screws. The torque required is approximately 30 N-m (22 lb-ft).



5. Check that the tailstock runs smoothly over the mating joint, and also over the full length of the extension. Although all components manufactured by Teknatool International are made to closest possible tolerances, it is possible for a difference of approximately 0.1mm to put the bed 'out of true'. The tailstock can bind in any given area in two possible ways:

   A) Jamming between slides (inside the wall of the bed)
   Using a smooth flat file, run over the area a few times until the tailstock frees itself. To maintain central running of the tailstock, both sides must be filed evenly.

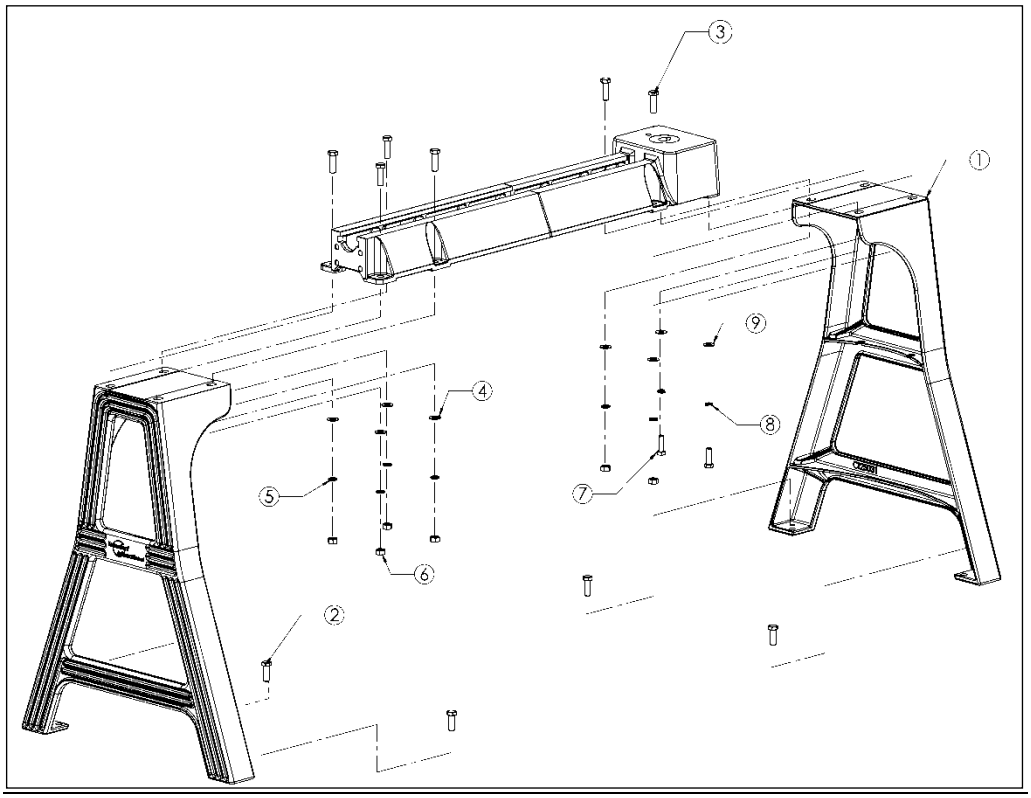
   B) The Tailstock clips or appears to jump over the join
   The machined flat surfaces may not be quite flush. Use a flat file and run over the join until the 'railroad clacking' sound disappears.

Mounting the lathe to the Cast Iron Stand

For safety reasons please carefully read and understand these instructions.

The Nova Cast Iron Stand was designed to fit and be used only for Nova Lathes. Use of the stand on other lathes could void the warranty, and risk personal injury.

The Nova Cast Iron Stand set comprises of two cast iron legs, one on either side, with skirt fastening holes facing the user. The Stand pieces are cast from a high grade of cast iron with extremely good section thickness and CAD generated internal gussets at all critical points to withstand extremely high stresses with practically no distortion. Cast iron has always been the material of choice for wood lathe construction because of its inherent mass and excellent modulus of vibration dampening.



NB: Front Face (user side) of casting legs must have skirt fastening holes facing out. See page 16 for skirt fastening instruction.

Parts List

No.	Code	Description	Qty
1	57034	STAND MACHINED CAST IRON NOVA	2
2	BNMZ12030	BOLT ENG M12X30	4
3	BNMZ12050	BOLT ENG M12X50	6
4	FW12	WASHER FLAT M12	6
5	SW12	WASHER SPRING M12	6
6	NHZ12	NUT HEX M12	6
7	BNMZ10035	BOLT ENG M10X35	2
8	SW10	WASHER SPRING M10	2
9	FFW10	WASHER FLAT FENDER M10X32X1.6	2
	57058	SKIRT (NOT SHOWN IN PICTURE)	1
	NFW06	Nylon Shim (NOT SHOWN IN PICTURE)	8
	FFW06	6 Washer C Degree (NOT SHOWN IN PICTURE)	8
	MP30608	Screw (NOT SHOWN IN PICTURE)	8

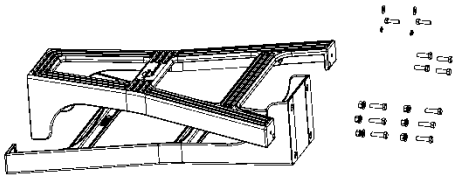
Suggested Tools for Assembly

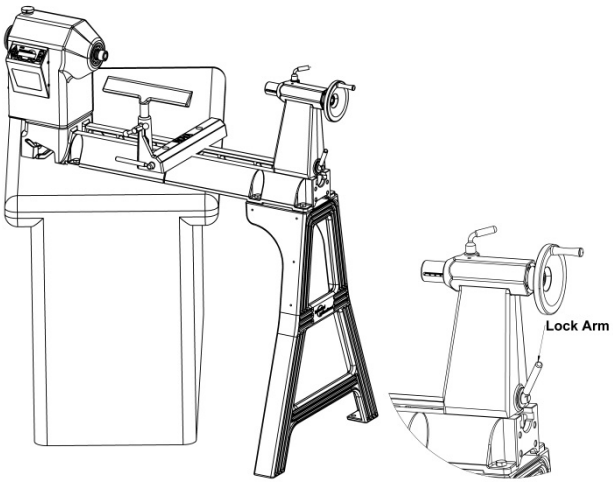
- Ratchet and M10 socket
- At least one other Person
- Saw benches or workshop bench both need to be greater than 860mm (33 7/8”).
- 5/8” or 16mm Ring/ Open End Spanner
- 3/4” or 19mm Ring/Open End Spanner
- 8” Adjustable Spanner

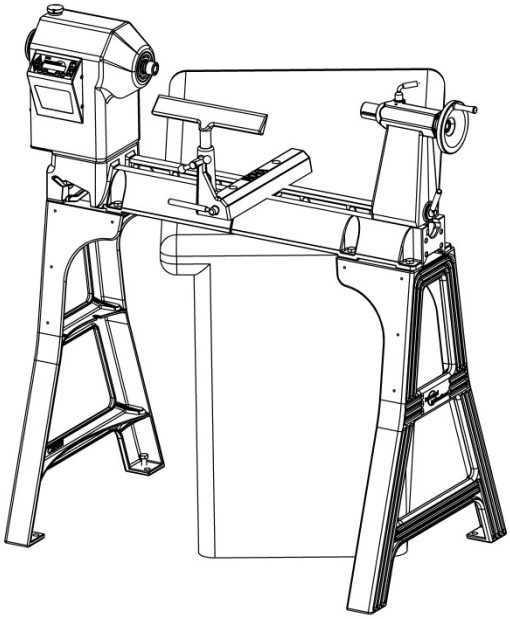
ASSEMBLY INSTRUCTIONS

SAFETY: The stand and lathe elements are heavy, please ensure correct lifting techniques and equipment are used and have someone to assist. Use correct tools and observe recommended practices.

Set up your workshop area before beginning assembly of the lathe stand.





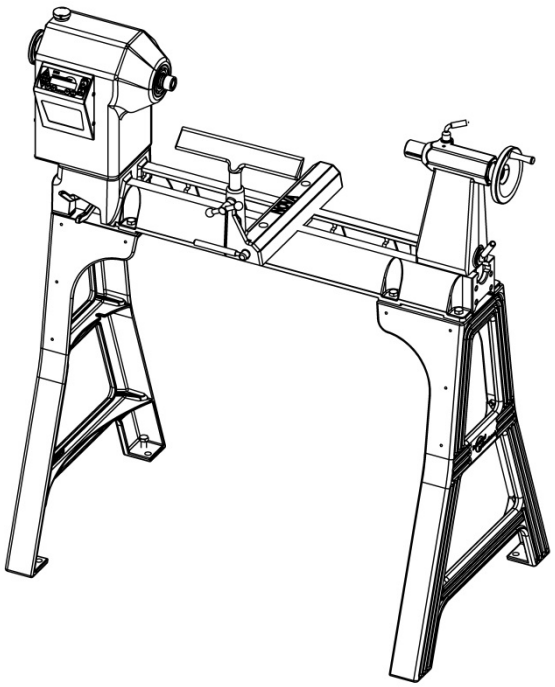


1. Open the cardboard box and identify the parts against the parts lists provided (above)
2. Stand the two legs upright facing each other at approximately the same distance apart as the length of the lathe. The Stand legs will stand upright on their two feet, although not very stable, but this is enough to carry out the assembly.
3. For this step you will need a second person and a table, saw horses or workshop bench of suitable height. (If the table is not high enough then you may need to put blocks underneath). With the help of a second person, move the lathe from the box and up to the bench or onto the saw horses. It may be easier to cut the box away in order to prevent any dangerous loading on your back.

   Notes:
   - Check the tailstock is securely fastened by tightening the lock arm.

Once the following checks have been made the headstock and the tailstock can be used to assist in the lifting of the lathe.

4. Move the lathe on the bench so that the tailstock end is overhanging and accessible. Attach the legs sloping to the right on this end. Drop the M12 x 50 hex bolts through the holes and then fasten underneath with the washer and nut.
5. Next do the headstock end. Note that the left most fastenings are inserted upward into two blind holes into the lathe bed.

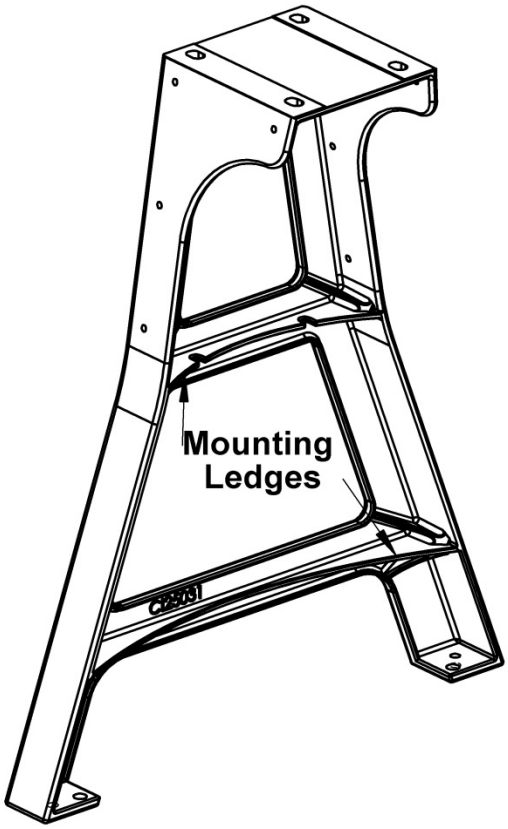


6. Now, with the help of a marker, mark the position for drilling holes into concrete floor for securing the construction bolts. On the feet of the Stand legs, there are two holes, one is an M12 tapped hole for the jacking bolts, the other is a plain 14mm hole for the construction bolts. The position for construction bolts has not been shown in the exploded view.
7. Once the hole positions have been marked, shift the lathe aside and install the construction bolts. Refer to your supplier on the size of drill recommended for the construction bolts you buy.
8. Lift and position the complete unit over these construction bolts. Tighten all nuts firmly.
9. Install all M12x30mm bolts (part 2) for jacking as shown in the exploded view in the M12 tapped holes on each of the feet of the Stand legs.
10. Level the lathe bed with the help of the above jacking bolts with the help of a spirit level.
11. Once the lathe has been leveled tighten all construction bolts firmly.

Re-inspect to ensure all fasteners are firmly secured everywhere.

Stand Shelf

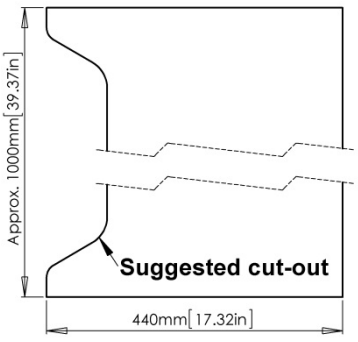
The Cast Iron stand has provision for customer shelving between the legs under the lathe. The exact length of the shelf will depend on how the legs have been setup and adjusted.

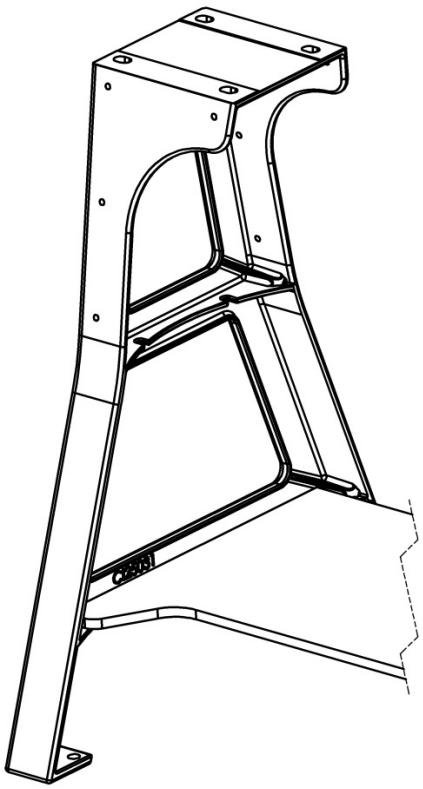


If thicker wood is used, the edges of the shelf ends may need to be relieved to allow the shelf to fit into the leg castings.

For the bottom shelf there are example dimensions below.

It is recommended that the shelf has a cutout along the front edge to enable free foot movement around the lathe.





Mounting the Skirt to the Stand

To mount the skirt to the cast iron stand, the lathe must first be completely and securely assembled onto the cast iron stand.

Fastener parts list		
Qty.	Image	Description
8		Screw M6x12
8		Rubber Pad
8		Rubber Backed flat washer

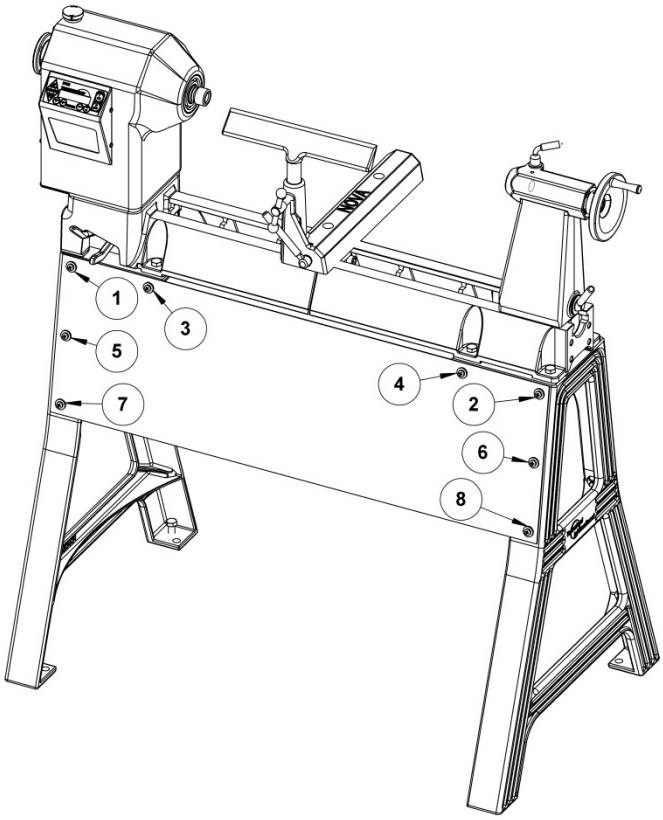
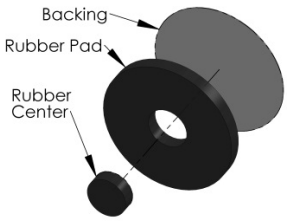


Figure 1 (Fastening sequence)

1. Clean the area around each of the eight skirt mounting holes on the stand legs.
2. Remove the center and backing on the rubber pads and place one around each of the eight skirt mounting holes in the stand leg.



3. Hold the skirt up by its top edge. From the front side of the skirt, insert a screw and rubber backed washer through the first mounting hole in the skirt as in Figure 1 (Fastening sequence). Make sure the Rubber on the washer is against the skirt.
4. Screw it into its corresponding top hole in the stand. Make sure a rubber pad is on both sides of the skirt as in Figure 2 (Fastener layup). Tighten finger tight to allow adjustment when installing the remaining fasteners.
5. Repeat procedures 3 and 4 for the remaining 7 fasting points following the fastening sequence detailed in Figure 1.
6. Once all eight mounting holes have fasteners, tighten each screw snug.
7. Re-inspect to ensure all fasteners are firmly secured.

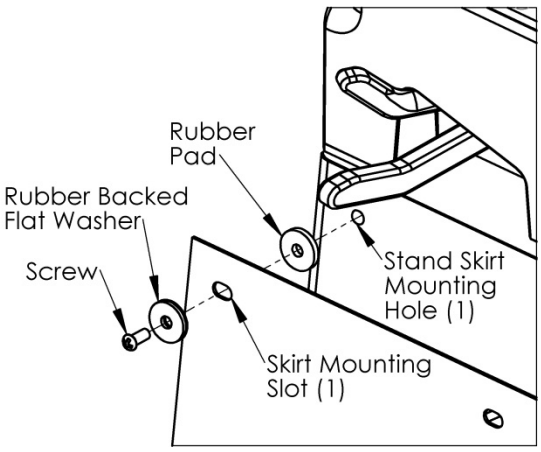


Figure 2 (Fastener layup)

Connecting to Power

The power cord should be 3-wire, having a grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with local electrical codes.

Warning!
Improper connection of the motor can result in a risk of electrical shock.

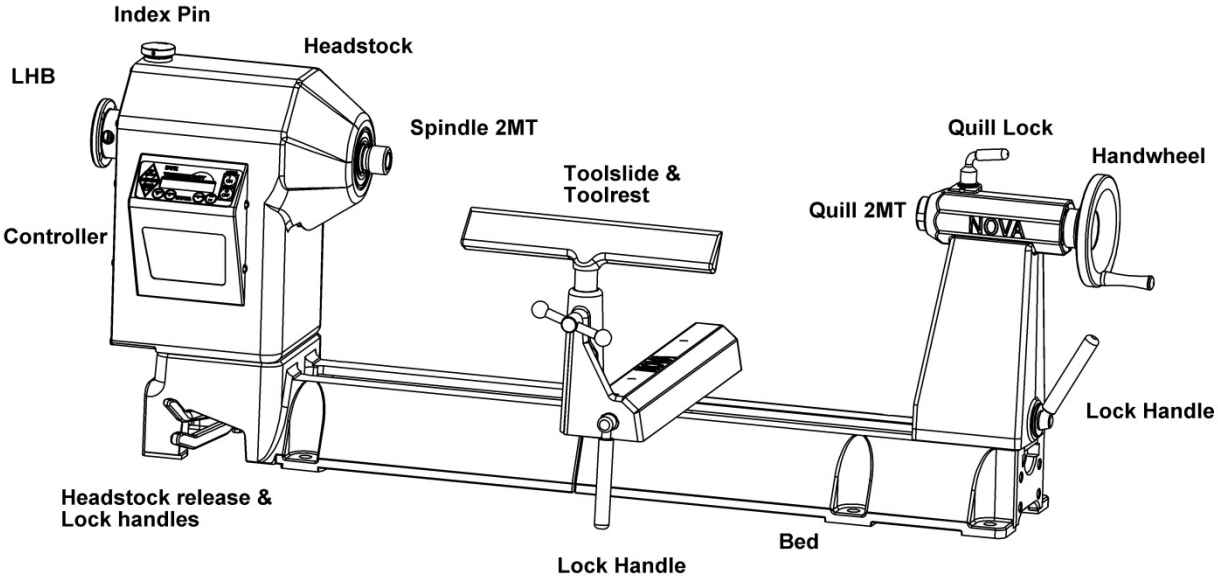
If it is necessary to use an extension cord, the cord should be grounded. Use the correct wire size for the extension cord, for a given cord length, to avoid power loss and over-heating.

IMPORTANT: A Surge Protection Device rated to at least 15 amps - for USA and Canada, other countries 10 or 15 amps - **must be used** to protect the DVR electronics from electrical spikes or surges, similar to those used on most Home PC's.

Note: Ground Fault Interrupters (GFI's) are generally not compatible with Variable speed motors. If you wish to use a GFI or RCD select a unit that is confirmed for use with a Variable speed motor using capacitor charge. The Machine must be connected to a suitable ground outlet.

Using the NOVA DVR 2024

Parts of the NOVA DVR 2024 Wood Lathe Assembled



DVR Variable Speed Controller

The Nova DVR drive is a unique type of motor and controller where the motor and controller interact. The motor provides data to the controller on its position and load conditions.

The motor provides high torque even at low rpm and inherits extremely close speed control.

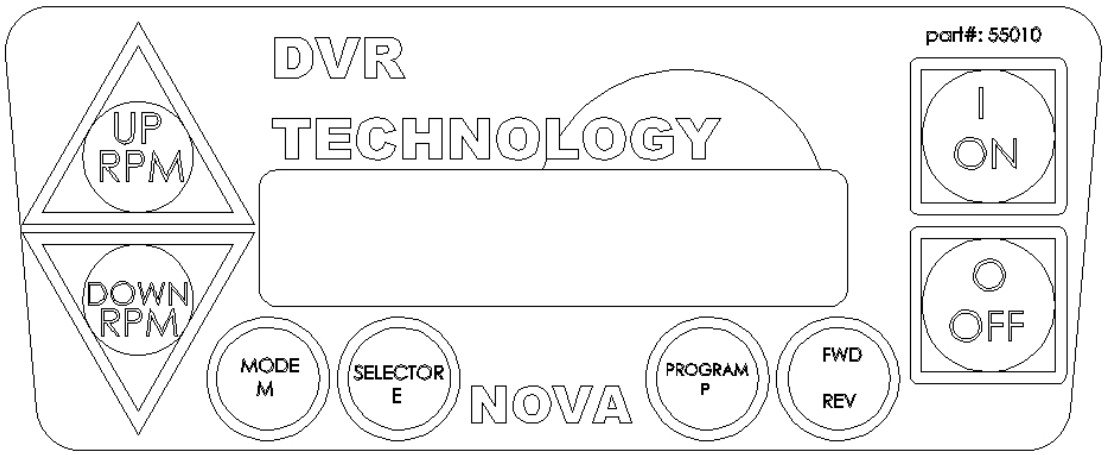
With the toggle switch in the "OFF" position, plug lead into wall socket and switch on.

An electronic tune will be heard as the controller computer "boots up" and the LCD display will show a two-line display.

DVR Drive Parameters

Motor Type: Digital Variable Reluctance	Accuracy of Speed Stabilization: <2.5%
Motor Power: 2.3 Hp (230v only)	Regulator Type: PID
Efficiency: > 0.80	Speed Stabilization: Current level, pulse width
Motor Speed Range: 100-5000rpm	Reverse: Yes
Default speed (when powering up) : 500 RPM	Speed Control: Button (5rpm increment)

DVR Drive Functions



3 4 1 2 6 5

A two-string liquid-crystal display panel (LCD) displays the current information.

```
Ready to run
   at XXXXrpm >>
```

"**XXXX**" is the reference motor speed.
">>" Indicates forward direction of rotation.

1. Green ON -- Press to start machine at the commanded speed -- always check that the **speed has been selected correctly. When the computer is first switched on it is set at a default speed of 500 rpm. Remember that whenever the computer is switched off at the wall or at the incoming power supply switch the computer will restart at the default setting. The spindle cannot restart until 1 "ON" is depressed.**

As with any Woodlathe ensure that the index is off and the work piece is free to turn without hitting the Toolrest etc. Ensure that the work piece is secure and the appropriate speed is selected.

```
Speed = CCCC rpm
 Ref -> RRRR rpm
```

"CCCC" = current value of the motor speed

"**RRRR**" = reference value. (Value selected)

When the On button is first pushed the screen will display "Go Low!! RPM" and then "4 retries left". These messages are normal; the computer first does a self-check**.**

2. **Red OFF key**. Pressing this key will stop spindle rotation.

   *The **ON / OFF** keys in the above panel only switch the motor on and off. The selected speed will remain until adjusted or computer switched off.*

3. **UP RPM**. To raise speed, one press of the key will increase speed by 5 rpm. Continuing to hold key pressed will continue to raise speed. The speed can be adjusted with the spindle running or off. To make a large adjustment in speed it is quicker when the spindle is OFF.

4. **Down RPM**. Press to lower speed this key operates the same as up key.

   The UP and Down keys can also be used in program mode to change the parameters.

5. **FWD / REV Key**. Pressing this key will change the motor rotation from forward to reverse. Pressing again will select forward. You can verify the direction by the two arrows at the bottom left or right of the screen**. Important: always verify the forward or reverse is selected correctly before switching spindle on.**

The Direction of rotation setting is only available in the ready to start mode. Press stop if necessary, and press FWD/REV to toggle direction of rotation. The two arrows on the right side indicate reverse.

Whenever reverse is selected a " Warning Reverse Selected " will flash on screen for about 1-2 seconds before spindle starts.

<u>Special and Parameter settings</u>

⚠ You may wish to change the stabilization setting from time to time depending on the type of work piece you are working on. You have 3 options preset for you:

1. SOFT: For light work at speeds lower than 500 rpm
2. NORMAL: Suitable for most work and is the default setting
3. HARD: For heavy and/or 'out-of-balance' work at speeds lower than 500 rpm

a) Press **<OFF>** if necessary.

b) Press **<PROGRAM>** (key #6 on diagram). The stabilization setting will be displayed. The default setting is NORMAL.

c) Press **<SELECTOR>** (key #7 on diagram) to toggle between the 3 options as mentioned above.

NOTE: Pressing **<MODE>** (key #8 on diagram) allows the user to change the parameter settings in more detail. This breaks it down into Proportional (Kprop) and Integration (Kint) settings which make up the PID control of the DVR. The 3 options of SOFT, NORMAL and HARD have been preprogrammed for your convenience and are balanced for optimum output. To clear special settings and return to default --- switch off computer at the master switch.

d) Press **<OFF>** button to return to ready state. (Ready to start mode).

While the machine is running if you push Program (6) the screen will display various diagnostics. Operation of the machine is not effected. Each time mode is pressed a different screen will show. This area is only used for advanced programming functions. Press OFF to return to ready state.

Auto safety -- If the power is lost to the machine, when power is restored the computer will reboot but the machine will not start until the 'ON' switch is pressed. Remember to correctly select speed if different from Default speed.

⚠ **Warning: Do not push several keys together as special coded combinations of keys open diagnostic and service functions. Some of these disable control and protection functions. If an unfamiliar screen is displayed, switch off the computer and leave for one minute before rebooting.**

If the DVR hasn't been used for some period (over one month) it is helpful to switch the unit on 30 – 60 minutes before use

Turning Tips

The Nova DVR Drive technology is not just a variable speed motor - its smart motor technology takes turning to a new level. The speed, vibration and load sensing, work with the conditions and turning. The machine will reward skilled turning with exceptional finish conditions. There is often no need for sanding. As you apply load (chisel pressure or depth of cut) the control will sense the change in spindle conditions and compensate accordingly. Get a feel of the communication between yourself and the motor turning by applying increasing force. The motor will respond by applying increased power to exactly maintain speed.

LOW SPEEDS 100-350: Select Hard Mode (see Special and Parameter settings)

Note – at low speeds 100- 350 rpm control of the chisel is important. At 250 rpm the motor still has good torque (in fact the torque is more or less the same as at 400 or 1000 – but at low speeds there is a difference , the DVR is a unique type of motor in that the control only supplies enough power to maintain the spindle at the commanded speed. It needs to sense the load from the chisel and then it will apply power as needed. At very low speeds the chisel can move fast compared with the rotation of the wood. The important thing is to have good control of the chisel and maintain steady cuts (using the same woodturning practices that produce quality cuts and finishes). In this way surprisingly heavy cuts can be achieved. However, rapid or incautious use of the chisel will be immediately sensed by machine and spindle will shut down and then automatically try a restart.

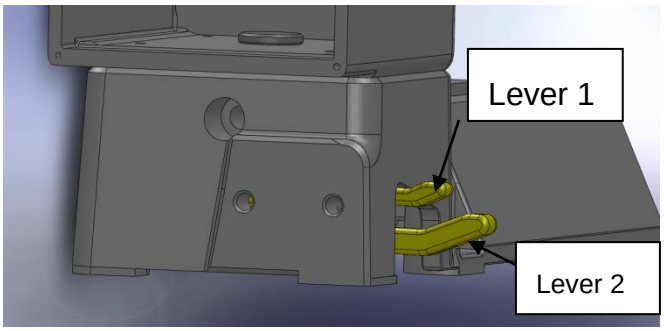
"Will The Machine Shut Down on Interrupted Cuts?"

No, as long as the cut is within the normal range of Woodturning cuts. An interrupted cut at slow rpm may cause a loss of control of the chisel and a dig in may occur.

A way to understand chisel feed rates is to consider that at 100 rpm, the work piece has only rotated about 1 and a half turns in one second and at 250 rpm, 4 turns. Considering that chisel feed or movement under normal turning can be anything between say 5 and 100mm per second at normal Woodturning turning speeds. At very low rpms it is easy to move the chisel too fast for good cutting conditions. In general, low rpm is only used for special processes or conditions. Speeds below 350 are generally not Woodturning speeds. The machine will operate down to 100 rpm but this is generally for applying finishes and other applications.

Swiveling the Headstock

1. Stop the lathe. Loosen headstock by moving lever 2 to the left most position
2. Slide the Headstock Release lever 1 Handle towards tailstock end of lathe, and rotate the headstock to a detent position. Do not push down on the handle.



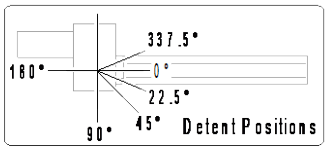
Warning!
Use the detent latch positions to prevent headstock movement during turning.

3. Firmly tighten the Headstock by moving lever 2 back toward the tailstock end of lathe until you feel it firmly tight, in some cases you may need the release the handle by applying downward pressure with thumb and 1 finger as shown in Fig: 1
but do not use excessive force if finger are place correctly as shown lever will slide down easily and disengage from locking nut.

   Then move lever to the left until it pops back up into the next available index position and repeat tighten as described earlier.

Fig 1

Note: Levers may differ from depicted; some models have red plasticized handles. The same operation to swivel and lock applies.



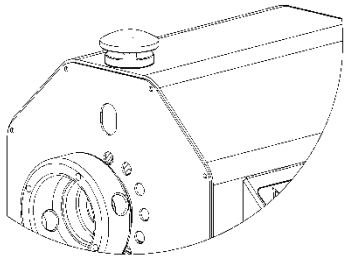
	Right-hand Turners	*Left-hand Turners*
Detent Positions	0, 22.5, 45, 90 degrees	180, 337.5 degrees

Spindle Index

The spindle index pin locks the headstock spindle. It is selectable in 15 degree increments (24 divisions). There is sight hole to read index numbers (0 through 23).

1. Stop the lathe.
2. Pull the index knob and turn it left until the pin drops into the hole. To lock the spindle it must engage into a hole in the headstock pulley.

Warning!
Make sure the index pin is out before operating the lathe. The pin should drop into the indentation in the headstock to prevent it from engaging while the spindle is turning.



E (1 : 2)

Divisions	*Index Number*	*Degrees*
2	0,12	180
3	0,8,16 (every 8th)	120
4	0,6,12,18 (every 6th)	90
6	0,4,8,12,16,20 (every 4th)	60
8	0,3,6,9,12,15,18,21 (every 3rd)	45
12	0,2,4,6,8…22 (every 2nd)	30
24	every hole	15

Headstock

The headstock houses the Rotor, Stator, Electronics, bearings, and the Spindle. The headstock spindle accepts centers and accessories with no. 2 Morse taper (#2 MT), plus threaded faceplates and chucks.

Spindle Thread Size

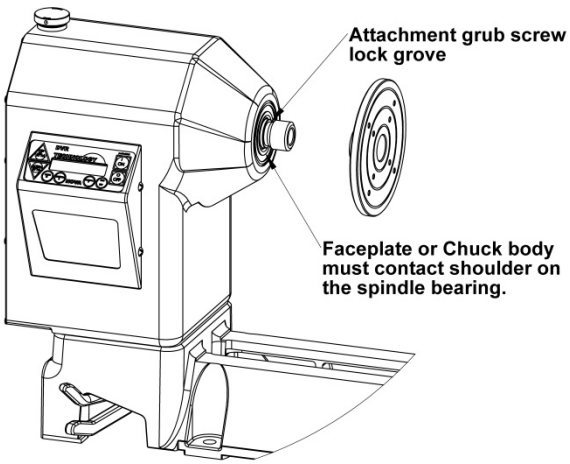
Country	*Threads*
United States, Canada, Australia, New Zealand, South Africa, United Kingdom.	1-1/4 x 8 TPI RH
Europe (excluding the UK)	M33 x 3.5 RH

Mounting a faceplate or chuck

1. Use the Spindle Index Pin to lock the headstock spindle.
2. Remove the side-locking screw, then wind the faceplate or chuck onto the spindle threads. A spindle washer in between may be used to make removal easier.

Warning!
The faceplate or chuck body must contact the shoulder on the spindle bearing.

4. Pull and turn the Index Pin and place it in the "safe" indentation in the headstock.
5. A vee groove is provided in the spindle for a special locking grub screw that is used in conjunction with Nova chucks and accessories to prevent unwinding during reverse operations. Wind in the side-locking grub screw and lock firmly in place, without over tightening.



Warning!
It is important that all Chucks and Faceplates that are used on the DVR spindles have a side-locking function.

Some older Teknatool products may not have a side-locking function. If any of these products are intended to be used on the DVR spindle they will need to undergo a modification to include the side-locking function or new products purchased with a side-locking function. All spindle mounted products produced by Teknatool International for the DVR Lathe have side-locking functions*.

The side-locking function should be used at all times while running the chuck on the spindle during operation. Without this function engaged the Chuck or Faceplate may unwind from the spindle during operation.

Warning!

When installing or removing the Faceplate or Chuck from the spindle, the side-locking grub screw **MUST** be completely removed.

This avoids any potential damage to the spindle that the grub screw may cause if it were not completely removed, when winding the Faceplate or Chuck on or off the spindle.

**Exception 1*. When an ILNS insert is used with a FP150Z faceplate on the DVR 2024 or a Spindle adaptor, the insert or adaptor must be locked onto the faceplate to avoid it unwinding when the spindle is run in reverse. Loctite 272 Thread locker is recommended.

**Exception 2.* Customers with dedicated threaded Teknatool chucks who intend using the chuck on the DVR 2020 Spindle must have a side-locking function adapted to the chuck before running it. Chucks with M33 threads may apply for Europe.

IMPORTANT NOTE

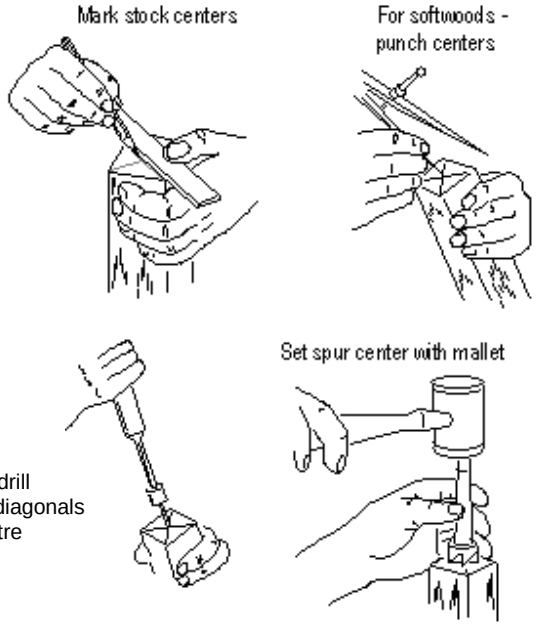
The Index Pin is designed for indexing and not for leveraging against, when removing faceplates, inserts and chucks. For this we recommend holding the spindle using the operating bar through the 2 LHB holes (Left Hand Brake).

Using a spur center

Mount the spur center to the work piece as shown and then insert the spur center and work piece into the headstock spindle.

Warning!
Do not pound work piece into headstock drive center when turning between centers or you may damage the headstock.

To remove the center, insert a 10mm (3/8-inch) diameter wooden dowel or steel rod through the headstock spindle hole. While holding the center so it doesn't fall, tap it out.


Mark stock centers
For softwoods - punch centers
Set spur center with mallet
For Hardwoods - drill centers and saw diagonals for spur drive centre

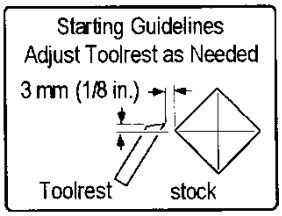
Toolrest

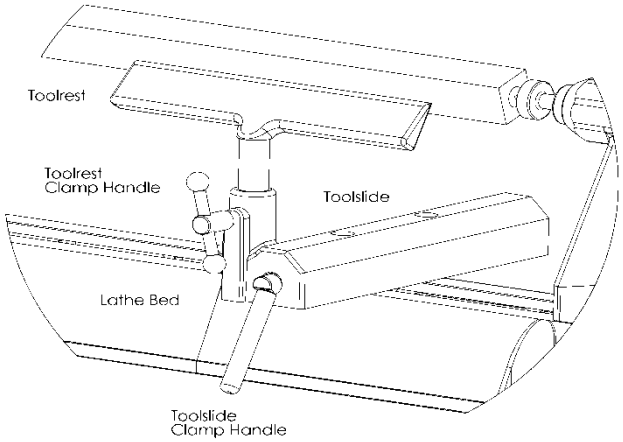
To move the Toolslide along the bed, loosen the Toolslide Clamp Handle, move the slide to the desired position, and tighten the clamp handle.

To adjust the Toolrest, loosen the Toolrest Clamp Handle, position the Toolrest, and tighten the clamp handle.

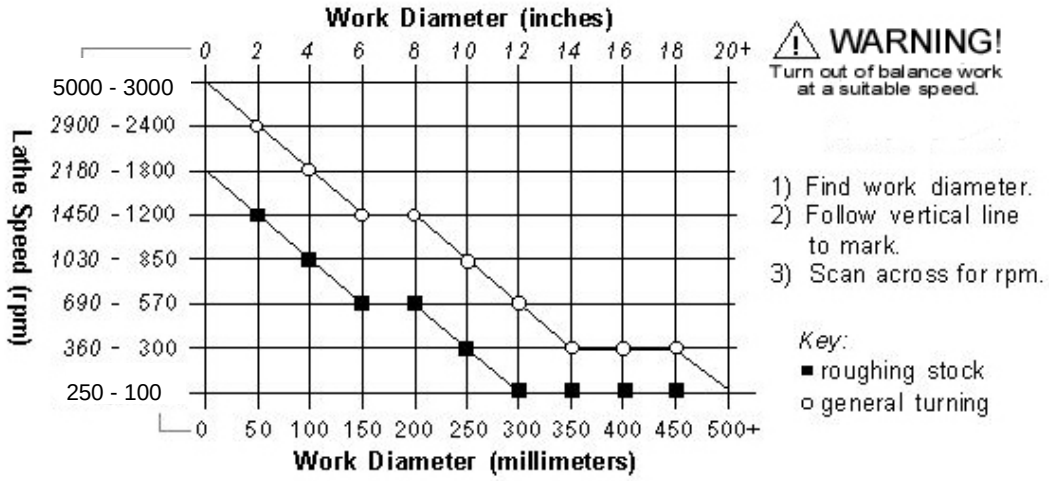
Adjust the Toolrest close to the work piece. Exact positioning may be varied to suit the turner. Before turning, revolve the stock by hand to make sure it clears the rest. At intervals, stop the lathe and readjust the Toolrest.

Warning!
Lathe tools and chisels should remain on the Toolrest whenever the tool is in contact with the work piece.
Remove the Toolrest when sanding or polishing so fingers do not get pinched.





Lathe Turning speeds


Work Diameter (inches)
0 2 4 6 8 10 12 14 16 18 20+
5000 - 3000
2900 - 2400
2180 - 1800
1450 - 1200
1030 - 850
690 - 570
360 - 300
250 - 100
Lathe Speed (rpm)
0 50 100 150 200 250 300 350 400 450 500+
Work Diameter (millimeters)
WARNING!
Turn out of balance work at a suitable speed.
1) Find work diameter.
2) Follow vertical line to mark.
3) Scan across for rpm.
Key:
■ roughing stock
o general turning

Correct selection of turning speeds is important for safety and finish cut quality

It is important to take into account the fixing of the work piece; it should be made as secure as possible. Various techniques are available for this consult books on the subject and seek training opportunities.

There are safety and out of balance considerations. Aim for a good balance in turning speed, ensure good fixing and try to balance timber as much as possible before installing on lathe.

In general wood likes being sliced and if too low a speed is used the timber can "hammer" against the cutting tool, tearing fibers and imposing large forces on the tool and work piece. This can often be dangerous, it is best to select a higher speed, the cut will be smoother and less force is imposed on the work piece. It can be likened to a wood plane, if it is pushed very slowly much force is needed to break the fibers, if the plane is pushed at a higher speed less forces are involved and a better cut results. Use 250 rpm when needed, but it is better turning at 400-600 rpm.

Tailstock

Warning!
Never loosen the Tailstock Quill or Tailstock while the work piece is turning.

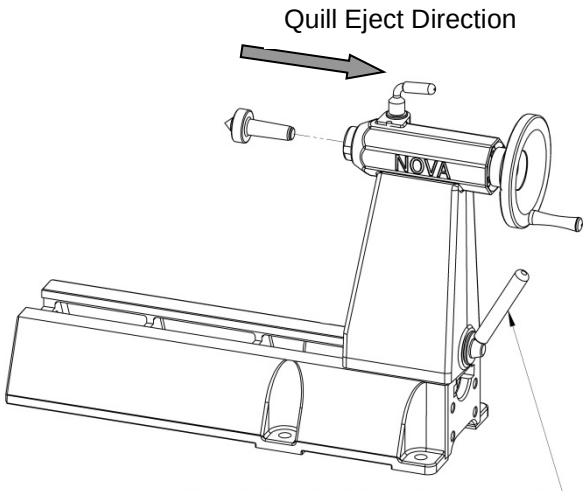
To move the Tailstock along the bed, loosen the Tailstock Clamp Handle, slide the tailstock to the desired position, and tighten the clamp handle.

To move the Tailstock quill in or out, loosen the Quill Lock and turn the Handwheel. Lock the quill in place with the Quill Lock.

The Tailstock Quill accepts centers and accessories with no. 2 Morse taper (#2 MT). To install a taper use a quick, firm action by hand. Do not pound the taper in.

To remove a taper, either wind the quill into the tailstock until the taper is ejected or insert the operating bar through the Tailstock Quill hole. While holding the taper so it doesn't fall, tap it out.

The Tailstock Quill is hollow, allowing you to bore holes through turnings if a hollow center is used.


Quill Eject Direction
NOVA
Operate Cam Lock Lever to release and lock tailstock. Can be operated forward or backward, whichever is convenient

Learning Turning

The art and technique of turning is a subject beyond the scope of this instruction manual. It is recommended that you receive hands-on instruction on lathe turning and/or refer to books and videos on the subject. For reference, some woodturning books are:

The Lathe Book
By Ernie Conover

Woodturning A Foundation Course
by Keith Rowley

Creative Woodturning
by Dale Nish

Turning Wood With Richard Raffan
by Richard Raffan

The Fundamentals of Woodturning
by Mike Darlow

CONTROLLER USER'S GUIDE

NOVA DVR (SWITCHED RELUCTANCE) DRIVE

Teknatool International

1.0 INTRODUCTION

1.1 General

This guide contains the basic information on use of the Digital Variable Reluctance (DVR) electrical drive for DVR Drive products.

1.2 Overview

The DVR integrated electrical drive system contains the DVR motor with the Rotor Position Sensor (RPS), the drive control board and the human-machine interface (HMI). The control board, RPS and HMI represent the control system of the drive. The DVR is connected with the control board by six power wires and RPS cable.

The control board contains power input devices – input rectifier, power factor corrector with the DC link reactor, three-phase inverter and the control circuit based on the 16-bit Infineon microcontroller.

The HMI contains the interface board, the LCD and keyboard. The interface board is based on the 8051 family Atmel microcontroller and connected with the control board through the insulated serial RS232 interface.

Both microcontrollers have flash program memory. The interface board microcontroller also contains the EEPROM memory in order to change and store the drive parameters. The control system has been specifically designed for control flexibility and to provide optimal drive performance.

2.0 MAIN PARAMETERS AND FEATURES

- The motor type – Switched Reluctance Motor (DVR)
- Nominal operating output power – 2.3 HP
- Power supply range: 220V 50Hz or 60Hz
- Power factor correction: PF $\geq$ 0.95
- Speed range: 100 – 5000 rpm
- 5 preset (favorite) speeds with save function.
- PI speed controller with adaptive coefficients
- 3 preloaded coefficient curves: SOFT, NORMAL and HARD
- Load inertia measurement for improving the PI speed controller coefficients (adoptive control)
- Reverse function
- Torque and speed ramp functions
- Overload protection
- Under-voltage / PFC fault protection

3.0 HUMAN MACHINE INTERFACE DESCRIPTION

The Human Machine Interface (HMI) provides a flexible choice of the drive parameters: run/stop, motor speed, direction of rotation, PI speed controller coefficients. HMI contains 2-lines, 16-position LCD display and keyboard. The drive parameters can be set by decreasing/increasing values incrementally. Some parameter values can be stored in the EEPROM of HMI.

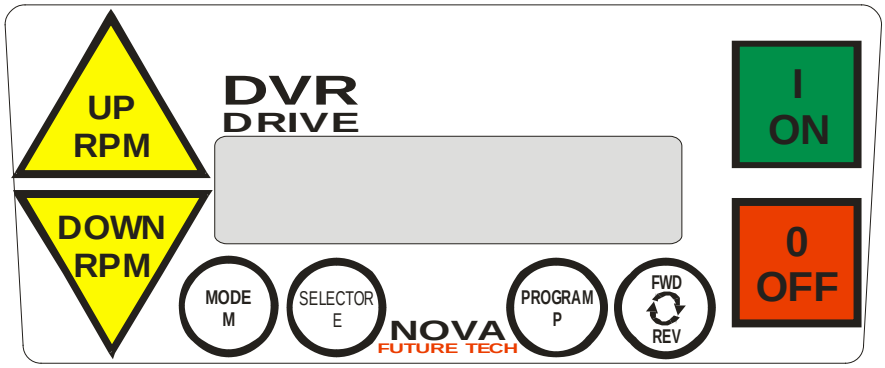


Figure 1: Keyboard view

3.1 Keyboard Description

The keys description:

Key view	Legend	Short Description
I ON	I	**- START KEY -** - run the motor -
0 OFF	O	**- STOP KEY -** - stop the motor and reset system -
FWD REV	R	**- REVERSE KEY -** - change the direction of motor rotation -
PROGRAM P	P	**- PROGRAM KEY -**
SELECTOR E	E	**- SELECTOR KEY -**
MODE M	M	**- MODE KEY -**
UP RPM DOWN RPM	S	**- UP KEY and DOWN KEY-** - Increase/Decrease and set the parameter incrementally -

4.0 CONTROL FUNCTIONS

Drive Parameter Settings (Set Function)

HMI display lines contain the parameters, which can be edited.

Press key

to incrementally increase the parameter or

to decrease it.

Hard Reset Function

Press key

, hold it and then press key

in order to provide the Hard Reset of the drive. Another way is to switch off the power, wait 10 seconds and switch it on again. Use this function if you want to return the factory-preloaded values of the drive parameters. Also, try to use this function if you have a problem with the drive, for example, if the system is not responding to the keys.

5.0 CONTROL OPERATIONS AT STOP MODE

5.1 Starting operation

Insert the drive power plug into the 220-230, 50/60 Hz socket. There must be the sound signal and display messages step-by-step will be: (shown on the next page)

TEKNATOOL Int. v4.54xs03 2006

TEKNATOOL PROMOTES SAFETY FIRST

ALWAYS WEAR FACE SHIELD

ENSURE CORRECT SPEED SELECTED

Beeper will sound twice. Wait for message to end or press key

to cancel. After that the display message will be:

TEKNATOOL Int.
v4.54xs03 2006

The version number means:

`v4.54` **- control software version**

`x` **- XC164CS Infineon microcontroller with flash memory**

`s` **- Serial interface**

`03` **- Interface software version**

Note: This guide is updated for the **v4.54x** control software versions and **s03** interface software version, which are compatible with each other. The control software versions **v4.41x** and higher will also work but without some functions.

The drive will make the preparation procedure, check the fault conditions and after that the LCD will show the **Main display page** (for Stop operation):

LCD View	Comments
Set 500rpm=#2D **Ready to run >>**	**S** Reference speed and number (**D** = default speed number) **R** **<<**/**>>** - reference direction (forward/reverse)

Note: **S =** parameter can be modified using **Set Function**.
`R, P, E, M` = parameter(s) can be modified by one of keys in accordance with the keyboard description legend (see above page 28)

The drive is in **Stop** mode and ready to run the motor forward with the speed of 500 rpm.

5.2 Reference speed setting. Preset (favorite) speed selection and set function

There are 10 preset speeds available in the drive.
The factory-preloaded reference speeds are:

Number	#0	#1D	#2	#3	#4
Speed (rpm)	250	500	750	1020	1250
Number	#5	#6	#7	#8	#9
Speed (rpm)	1500	1750	2000	2250	2500

Note: The speed **#1** is default speed number.
The letter **D** after the number **#1** indicates it is default.

- Press the key

, hold it and press

or

in order to go from one preset speed number to the next one.

If the next preset speed is higher than 500 rpm, you will see warning:

LCD View	Comments
Go to 500rpm **P-confirm, E-Esc**	**S** Preset speed

Press the key

to confirm the choice or

("Escape") to return to previous speed.

- Use the **Set Function** (see 4.0) in order to increase/decrease the reference speed. In this case, if the reference speed is not equal to the preset speed of the current speed number, the symbol '**=**' will be removed from the LCD. For example, if you will decrease the reference speed using key

, the LCD will be:

LCD View	Comments
Set 450rpm #2D **Ready to run >>**	**S** Reference speed is now not equal to preset speed #2 **R** **>>** - forward direction

If you go back to the speed 500 rpm using key

then the symbol '**=**' will show on LCD.

Programming the Favorite Speeds

- Pick a preset number you would like to change. **IMPORTANT Note:** The default speed (#2D) cannot be set at more than 500 rpm and the saved preset speed values will work also after Hard Reset Function.
- Press the key

in order to make the request for saving the new value of pre-selected speed in the EEPROM (memory). It will display the symbol '**?**' at the end of LCD line. Change the speed you require.
- Press key

to store the new value. There will be the symbol '*****' instead the symbol '**?**'.
- Your new setting is now stored.

5.3 Set the direction of rotation (Forward/Reverse function)

- Press

to set the direction of rotation (**Forward/Reverse**). Each key pressing will toggle the direction. In reverse mode the LCD will be:

LCD View	Comments
Set 500rpm=#2D **Ready to run <<**	**S** Reference speed and number **R** **<<** - reverse direction

5.4 The Speed Control Loop. The PI Speed Control coefficients setting

The control system of the DVR Drive has a Speed Control Loop which provides the PI speed controller function. The KPror and KInt are the values of the Proportional and Integral coefficient of speed control loop. They are functions of motor speed. See Appendix A for the basic curves of the PI speed controller coefficients. There are three possible choices – Normal (default), Soft and Hard coefficient curves. The values **Kprop** & **Kint** are multiplied by 100 (given as a percentage).

- Press PROGRAM P ("Page") to go to next display page in order to select the coefficient curves:

LCD View	Comments
SPEED CONTROL **<E> NORMAL**	**E** Normal coefficient curves selected

- Press SELECTOR E to toggle changing the other coefficient curves:

LCD View	Comments
SPEED CONTROL **<E> SOFT**	**E** Soft coefficient curves selected

LCD View	Comments
SPEED CONTROL **<E> HARD**	**E** Hard coefficient curves selected

- Press PROGRAM P ("Page") again to see the PI coefficients:

LCD View	Comments
Kprop = 250 % * **Kint = 2000 %/s**	**S** Proportional coefficient value (in percent) for selected speed **S** Integral coefficient value (in percent/sec) for selected speed

Note: The LCD shows the values of the Proportional and Integral coefficient of speed control loop for selected speed. The parameters **Kprop** & **Kint** get their values from the curves and calculations.

- Use the **Set Function** (see 4.1) in order to increase/decrease the coefficient values to adjust the coefficients for your type of load.
- Press FWD REV ,hold it and press UP RPM or DOWN RPM in order to move the symbol "*****" at the display line end up and down in order to select the display line which is ready to edit.

Note: If you will change one of these values, it will be fixed and will not automatically change as the speed is adjusted. It will also over-ride load inertia until software hard reset.

- Use the Hard Reset Function in order to return the factory curves of these parameters.

5.5 Serial Number view.

- Press PROGRAM P ("Page") again to see Board Serial Number:

LCD View	Comments
SERIAL NUMBER **04067648**	The Control Board Serial Number

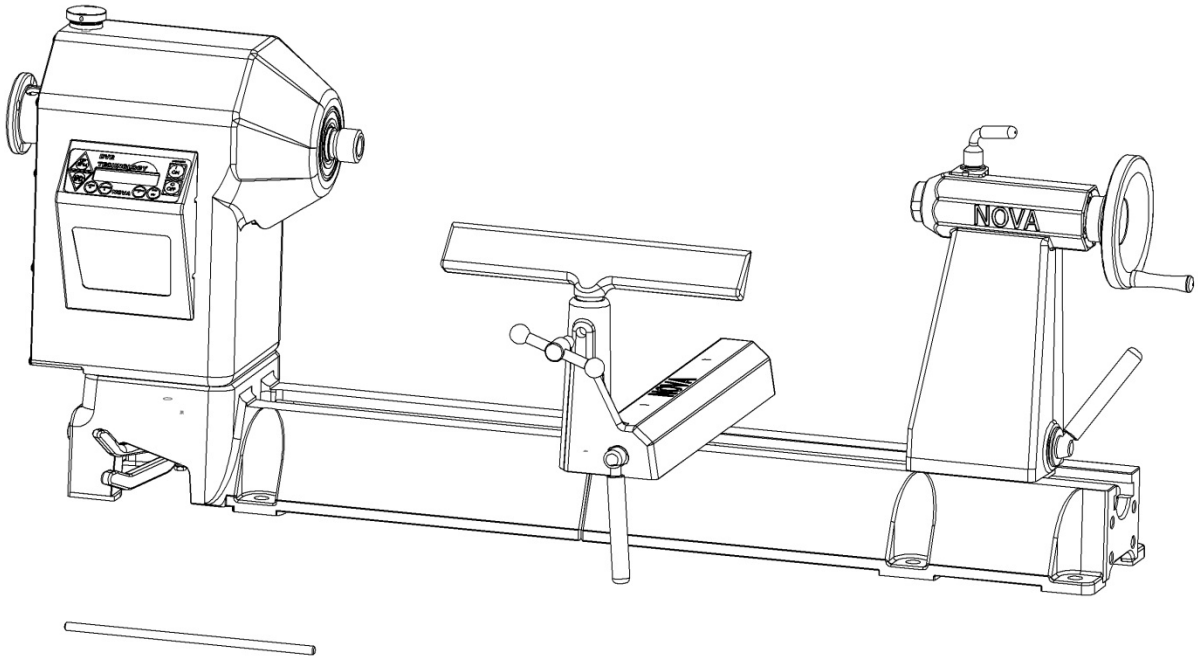
Press MODE M ("Main") to go to Main display page from any other display pages.

Maintaining the NOVA DVR 2024

General Maintenance

Always isolate from power supply (unplug) before carrying out any maintenance

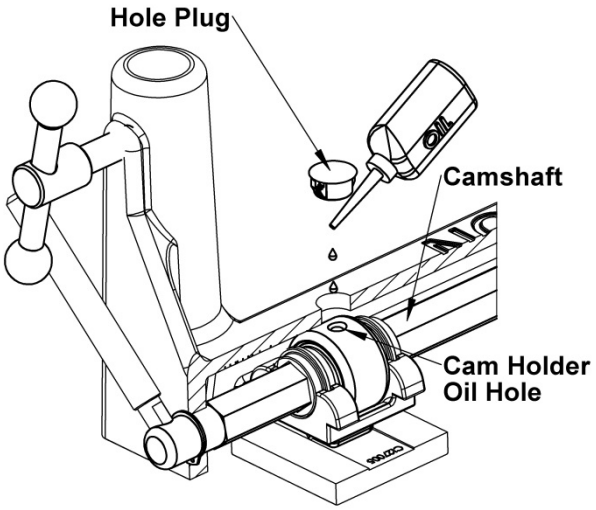
Interval	*Maintenance*
After each use	Clean the work area and Lathe. Vacuum shavings and dust from the Headstock, Tailstock, under the Toolslide and in between the bed.
Monthly	Wax exposed cast iron parts with a good quality paste wax, especially the bed rails. Buff out the wax thoroughly. Check tightness of nuts and bolts. Lubricate, with one or two drops of light-weight oil, the tailstock quill threads, index pin shaft, and the Toolslide camshaft (remove plastic plugs) and Toolslide front camshaft bore.
6 Months	Lubricate the tailstock slot with one or two drops of light-weight oil.



Cleaning the Toolslide

If the Toolslide becomes hard to move and adjust, cleaning and lubricating are required.

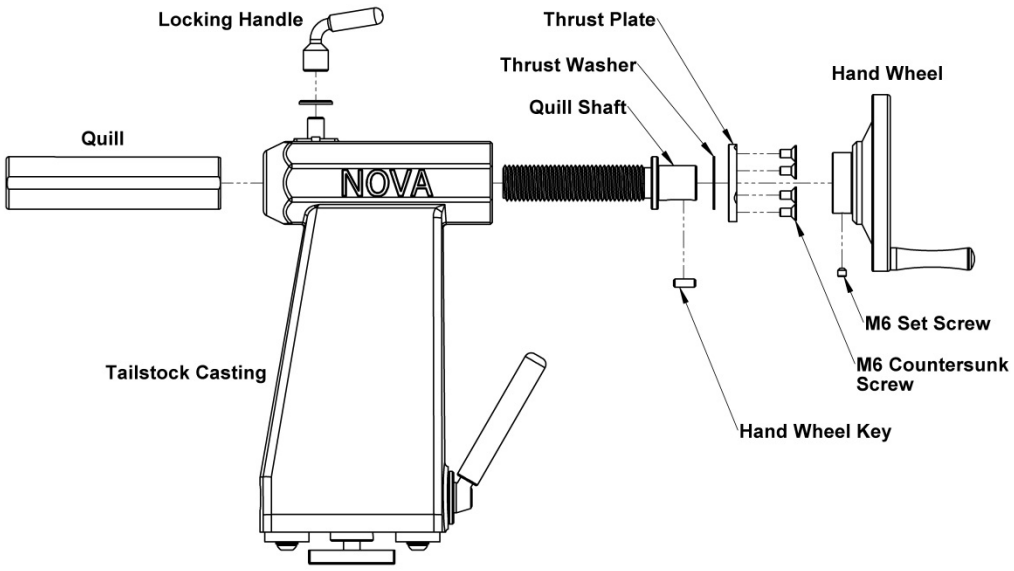
1. To make the Toolslide slide more freely along the bed, make sure the bed rails are clean. Apply some paste wax to the rails.
2. If the Toolslide is hard to move towards or away from you, remove the Toolslide from the lathe bed. Clean the Toolslide Camshaft (hexagonal rod) with a petroleum-based solvent. Lubricate the rod with high quality grease.
3. Remove one of the plastic Hole Plugs on the top of the Toolslide casting and align the Cam Holder so its Oil Hole can be accessed. Apply oil through the Toolslide Casting into the Cam Holder Oil Hole.
4. Reassemble and slide the Toolslide back onto the lathe bed.



Cleaning the Tailstock

If the Tailstock Quill becomes hard to use or the Hand wheel is hard to turn, cleaning and lubricating are required.

1. Wind the Hand wheel until quill is free of the thread and can be removed from Tailstock.
2. Remove the M6 set screw from the Tailstock Hand Wheel. If necessary, turn the Hand wheel to expose the set screw hole.
3. Using light force slide the Hand wheel from the Quill shaft. Note light blows with a soft mallet may assist..
4. Remove the 4 M6 countersink screw retaining the thrust plate. Note! There is a special fiber thrust washer on either side of the thrust plate.
3. Remove the quill from the Tailstock Body Casting.
4. Wipe cleans all parts including the inside of the tailstock.
5. Lubricate the Quill and tailstock slot with lightweight oil and apply a small amount of grease to the threads inside the Quill and on the Quill Shaft.
6. Reassemble.



Aligning the Tailstock

1. Crank the Hand wheel back so the quill is all the way in.

2. Place any #2 MT accessories you have that have a sharp point like a spur center, or live center in the tailstock quill and another center in the headstock spindle.

ⓘ *Note: Tailstock alignment can be made easier by using the double ended NOVA Acurline Accessory Center (SKU: 2MTNA) in place of the centers.*

3. Move the Tailstock close to the Headstock so the two centers nearly touch; check the alignment of the center points. Move the Tailstock away from the Headstock and extend and lock the Quill. The points of the centers should align when the Quill is halfway extended, fully extended, and fully retracted.

If the centers are aligned at all three locations no adjustment is necessary.

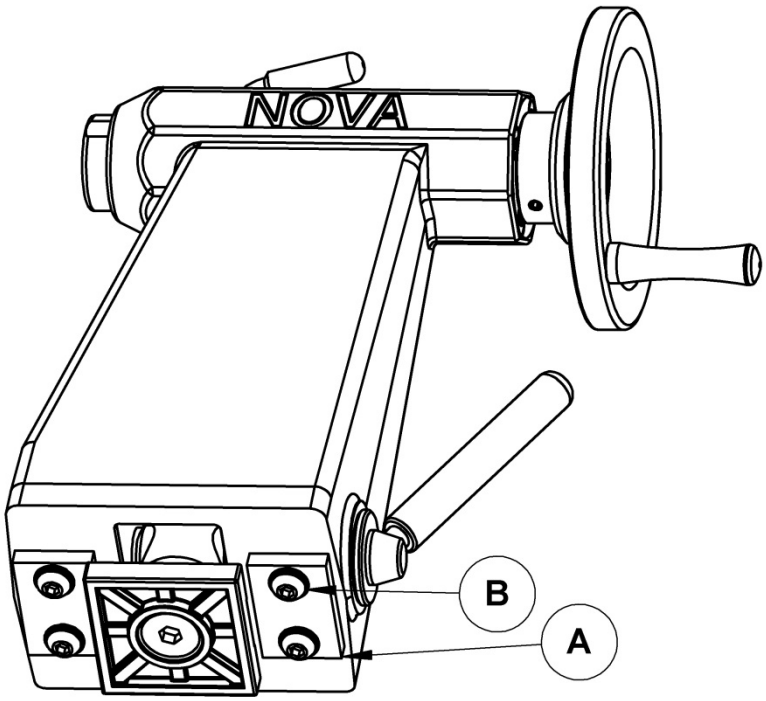
4. If the Tailstock does not meet the conditions in step 3, follow the steps below. This indicates that the Tailstock is not parallel to the lathe bed and you will need to realign the Tailstock.

5. First make sure the Tailstock alignment plate **(A)** is not binding inside the bed. If the Tailstock doesn't move freely, then remove the Tailstock and look for burrs or high spots on the bed rails or the alignment plate **(A)**. Using a smooth file remove any burrs or high spots. When done replace the tailstock on the bed.

6. Slightly loosen the four cap screws **(B)** securing the tailstock ailment plates **(A)** with a 5mm Allen wrench. Tap the Tailstock with a wooden mallet in the appropriate direction to align the centers. Check and adjust the positioning of the Tailstock. The centers should align when the quill is halfway extended, fully extended, and fully retracted, as previously described in step 3.

7. Lock the tailstock in place with the Tailstock Clamp Handle and fully tighten the four cap screws **(B)**. The cap screws **(B)** must be fully tightened in order to avoid slippage during work.

8. Check the alignment of the Tailstock by bringing it together with the Headstock, with the Live center and Spur center in each spindle. The Points on the centers should be within 0.50mm (0.020") height and width of each other



Troubleshooting Guide

Problem	*Possible Cause and Solution*
Excessive vibration.	Out of balance, or large work piece. Reduce lathe speed to the lowest speed possible and turn the work piece to a true circle. Adjusting the speed using the up / down keys will change the speed in 10 rpm increments. If you try adjusting the speed up or down you will find that it is easy to find speed points that will minimize vibration and is one of the biggest advantages of DVR technology.
	Work piece is not held in the center. Check work piece mounting and correct.
	Work piece is not secure or held tight enough. Check work piece mounting.
	Lathe incorrectly bolted to stand or bench. Refer to this manual for lathe stand recommendations.
	Stand or bench not well constructed, too light, or not level on the floor. Make sure the stand is solidly constructed. Use sandbags to weigh down the stand.
	The metal floor stand should be Rawl bolted to the concrete floor, at the 4 mounting hole points.
Faceplate or chuck running out of true.	Dirt build-up on the rear of the faceplates or chuck. Clean off all build-up and dirt. Faceplates and chucks must mount securely against the inner bearing ring surface of the spindle.
Turning tools not sliding smoothly across Toolrest.	Damaged surface on Toolrest face caused by sharp edged tools. File the Toolrest using a fine smooth file and polish with extra fine sandpaper. Also remove the sharp edges from the corners of turning tools.
Spur drive center or live center not holding into the spindle taper or quill taper when turning.	Small end of Morse taper is damaged due to dropping or hitting. File or polish away any damage. Check that inside of tapers have not been scored.
	Grease or oil inside of Morse tapers. Wipe clean the inside of the tapers.
	Insufficient pressure when installing the center. Use a quick, firm action by hand to install a taper. Do not knock in using any solid object.
Display screen not on	Is master switch on? Toggle master switch to "ON" position.
	Check machine is plugged into wall socket and switched on.
	Check that the wall switch plug is live by plugging in another power tool if the other power tool doesn't go check your board fuse.
	Check the master fuse on the lower rear guard. Ensure machine unplugged (see Additional safety rules at the front of this manual). If blown, replace with the spare fuse that comes with the lathe. Do not replace with a higher amp fuse.

Display screen shows

Rotor Fault
<Flashing>

Press off button; switch off computer by master switch wait one minute and switch on again. Check that the spindle index is not engaged or that something is preventing the spindle from turning. Note leaving the spindle index unit in will not harm the motor; however it will put some strain on the index unit. It is likely that the spindle index will be left in from time to time and the motor is designed for this.

RP State Error
<Flashing>

The optical sensors that give the spindle position feedback ('Rotor Position' State) are obscured, damaged or have been disconnected. Dust over a long period of time may have settled on the sensors. Firstly spin the spindle by hand to create a draught through the sensors. Re-try the motor. If the error remains, with the power switched off and disconnected, remove the upper-rear guard and remove any wood dust with a vacuum cleaner. Avoid getting the nozzle too close to the electronics. After this step dust may fall into the Headstock so suck the dust out through the vent at the front of the Headstock under the spindle. Do this sequence a few times. Try blowing if available with Vacuum or Air gun. Replace guard.

LCD screen shows

PFC Corrector
<Flashing>

The computer has built in voltage condition and temperature sensors, if this message appears, check the temperature of the lower section of the headstock. If it is very hot, switch off the master switch and leave the machine to cool down for a period. If the headstock is relatively cool the computer may have detected an under and over voltage from the mains power. Switch off and try rebooting. The DVR has a high level of protection and is intelligently checking conditions all the time.

ⓘ *Note: Can't find the answer in this Trouble Shooting guide?*

Visit the Lathe Support Section on our website - this is packed with Frequently Asked Questions.

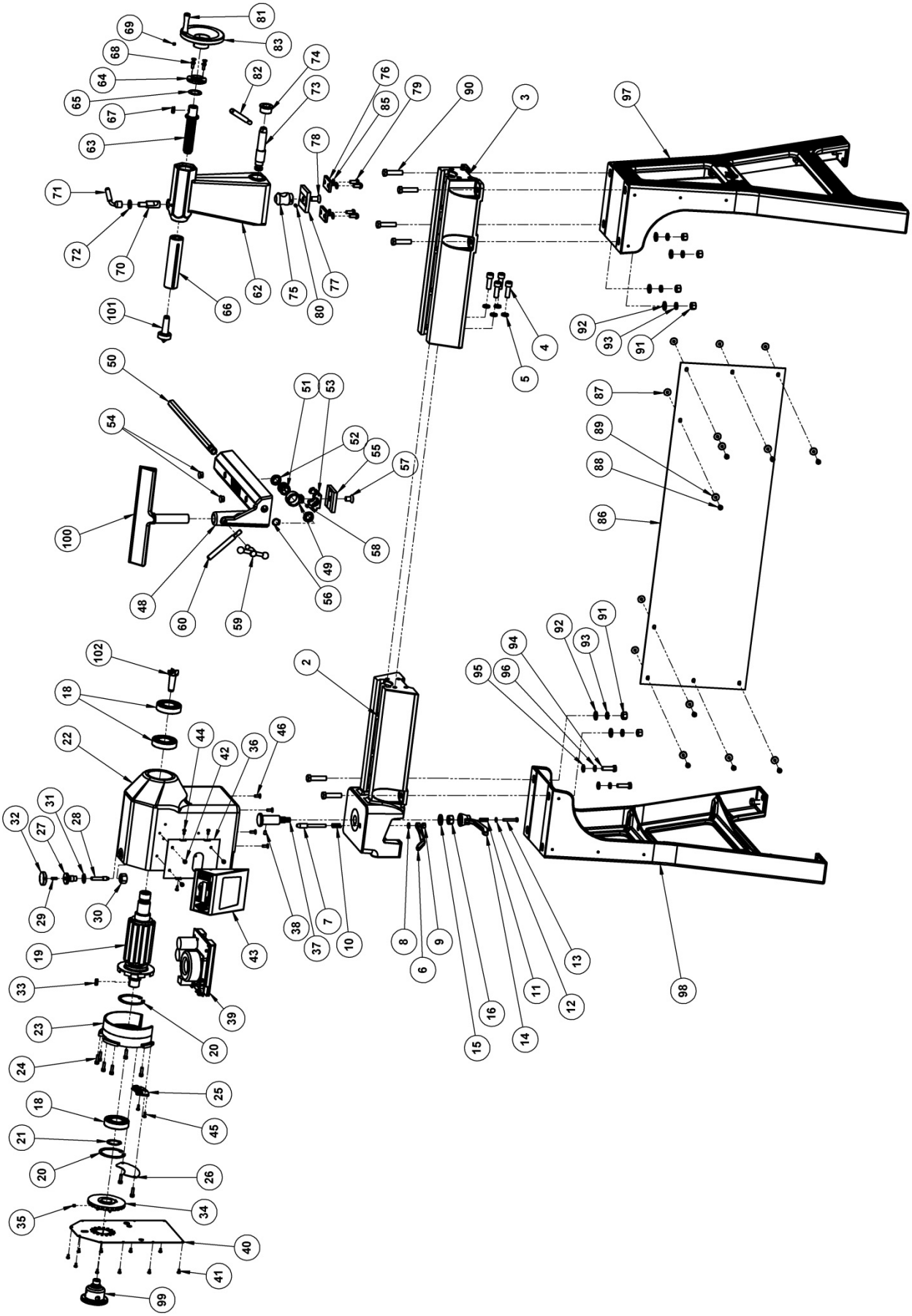
Or

Contact us (details are at the front of this manual)

Troubleshooting Guide continued

Problem	*Possible Cause and Solution*
Tailstock and Headstock center not lining up correctly.	Bed incorrectly bolted to stand causing twist. Ensure stand and lathe are correctly installed.
	Headstock not returned to detent position after it has been rotated. Ensure that the headstock is locked into a detent position.
Tailstock Handwheel hard to turn or will not turn.	Quill lock is locked; unlock the quill lock. If necessary, lightly tap a block of wood against the Handwheel handle; tap the handle in a clockwise direction as viewed from the tailstock end.
	Build up of dust and wood resin on the quill or inside of the Handwheel thread. Remove, clean, and lubricate the quill and tailstock as described under "Cleaning the Tailstock".
	The Quill has been extended too far and is locked against the Handwheel. Push the quill back into the tailstock when turning the Handwheel.
Tailstock quill hard to move.	Quill lock is locked; unlock the quill lock.
	The quill is damaged; turn the handle to expose the quill and check for marks along the quill, especially on the edges of the slotted keyway. Remove the high spots with a smooth file and test the quill travel. Replace the quill if necessary.
Tailstock not locking correctly onto bed, or tailstock not sliding smoothly on bed ways.	Tailstock adjustment plate not adjusted correctly; adjust as described under "Aligning the Tailstock".
	Dirty bed ways and underside of tailstock body. Clean bed ways and underside of tailstock body with a petroleum-based solvent.
Tailstock binds.	The inside of the bed has a high spot. File the area with a smooth flat file until the tailstock moves freely.
	The tailstock adjustment plate has a rough spot or a burr. Remove the tailstock and file the plate with a smooth flat file.
Tailstock jumps where bed sections join.	The machined flat surfaces are not flush. File the area with a smooth flat file until the tailstock moves freely.

NOVA DVR 2024 Wood Lathe Parts List

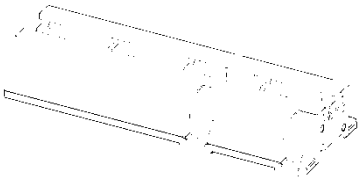


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1		Headstock Assembly	1
2	57118	Main Bed	1
3	24119	Extension Bed	1
4	C06020	Hex Socket Cap Screw M6x20	4
5	SW12	Spring Washer M12	4
6	57176	Headstock Detent Lever	1
7	57023	Headstock Detent Pin	1
8	FW08	Flat Washer M8	1
9	NHZ8	Hex Nut M8	1
10	24060-1	Headstock Detent Spring	1
11	55056	Spring 25mm	1
12	FW06	Flat Washer M6	1
13	BNMZ06040	Hex Head Bolt M6x40	1
14	57209	Headstock Lock Lever	1
15	FWH16	Flat Washer M16	1
16	57208	Nut M16	1
18	6207VV	Headstock Spindle Bearing	3
19	57008	Motor Rotor Assembly	1
20	IC72	Internal Circlip 72mm	2
21	EC35	External Circlip 35mm	1
22	57000	DVR 2024 Headstock	1
23	57146	Headstock Bearing Carrier	1
24	C06020	Hex Socket Cap Screw M6x20	8
25	55020	Position Sensor	1
26	55174	Sensor Guard	1
27	55035	Index Pin Bush Guide	1
28	55033	Index Pin	1
29	TP131658	Spring Pin	1
30	NHH16	Hex Nut M12	1
31	55137	Lock Washer External Lock 16mm	1
32	55036	Index Pin Rotating Handle	1
33	55051-20	Key 6x6x20mm	1
34	55011	Index Fan	1
35	G0606	Hex Socket Set Screw M6x6	1
36	55040	Backing Plate	1
37	57207	Swivel Pin	1
38	G0610	Hex Socket Set Screw M6x10	1
39	57300	Control Board Assembly	1
40	57171	Headstock End Cover	1
41	MPB0408	Button Head Screw M5x8	10
42	MPB0508	Button Head Screw M5x8	4
43		Control Panel Assembly	1
44	STPB5	Button Head Screw	4
45	MPB0412	Button Head Screw M4x12	2
46	K0616	Countersunk Hex Socket Screw M6x16	4
47		Toolslide Assembly	1
48	57009	Toolslide Casting	1
49	57014	Toolslide Cam Holder	1
50	57010	Toolslide Camshaft	1
51	CS57013	Toolslide Lock Cam	1
52	CS57012	Toolslide Lock Camshaft Bearing	2

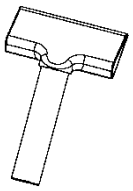
53	CS57011	Toolslide Lock Cradle	1
54	HP-16	Plastic Hole Plug	2
55	27006	Lock plate Tailstock & Toolslide	1
56	EC35	External Circlip 35mm	1
57	K1225	Countersunk Hex Socket Screw M12x25	1
58	G0610	Hex Socket Set Screw	1
59	24057	Tee-Lock	1
60	57253	Lock Arm	1
61		Tailstock Assembly	1
62	57017	Tailstock Casting	1
63	57042	Tailstock Quill Shaft	1
64	57019	Tailstock Thrust Plate	1
65	57039	Tailstock Thrust Washer	1
66	57020	Tailstock Quill	1
67	55051-20	Key 6x6x20mm	1
68	K0616	Countersunk Hex Socket Screw M6x16	4
69	G0606	Hex Socket Set Screw M6x6	1
70	55026	Quill Lock	1
71	55029	Tailstock Quill Lock Lever	1
72	FW12	Flat Washer M12	1
73	57025	Tailstock Lock Camshaft	1
74	55027	Tailstock Camshaft Sleeve	1
75	24048	Tailstock Cam	1
76	25029	Tailstock Alignment Plate	2
77	27006	Lock plate Tailstock & Toolslide	1
78	K1225	Countersunk Hex Socket Screw M12x25	1
79	BHC0816	Hex Socket Button Head Screw M8x16	4
80	G0610	Hex Socket Set Screw	1
81	57065	Tailstock Handwheel Handle	1
82	57253	Lock Arm	1
83	57043	Tailstock Handwheel	1
84	CM0815	Countersunk Hex Socket Screw M8x15	1
85	FW08	Flat Washer M8	4
86	57058	Skirt	1
87	55030	Adhesive backed Rubber pad M6	8
88	MPB0612	Cross Button Head Screw M6x12	8
89	FFW06 + 55030	Flat Washer 6x20 + Rubber pad	8
90	BNMZ12050	Hex Head Bolt M12x50	6
91	NHZ12	Hex Nut M12	6
92	FW12	Flat Washer M12	6
93	SW12	Spring Washer M12	6
94	BNMZ12035	Hex Head Bolt M6x40	2
95	FW12	Flat Washer M12	2
96	SW12	Spring Washer M12	2
97	57035	Rear Cast Iron Stand Legs	1
98	57034	Front Cast Iron Stand Legs	1
99	LHB	LHB	1
100	24120	Tool Rest	1
101	2MTLC	Live Center	1
102	2MTSPUR	2MT Spur Center	1

Accessories

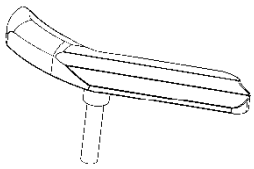
Add On Bed Extension: 55195
Extend the bed of your Nova DVR 2024 Woodlathe for greater capacity for turning between centers. Each bed unit adds 510mm (20in.)



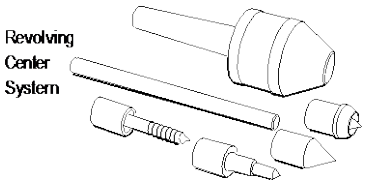
Small Toolrest: TR100/1
A small 100mm (4in.) Toolrest for turning small work pieces or reaching into recessed areas.



Bowl Toolrest: TRB/1
A curved Toolrest, which gives you better chisel support on both the outside and inside of a bowl. Because of the curve you are able to position your chisel support closer to the bowl.

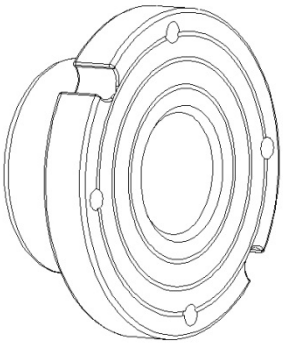


Revolving Center System: NLCS or NLCS1
A multi-function live center system to expand your options when turning between centers. It includes quick change tapers: a hollow cup center point, threaded center, cone center, and an extension center. Made with three bearings and precision machined for a high quality finish.



Faceplates:
FP150L
Faceplates are used to mount the work piece when faceplate turning bowls or platters. The 150mm (6") faceplate is made of solid steel. Comes standard with the 2024 Lathe.

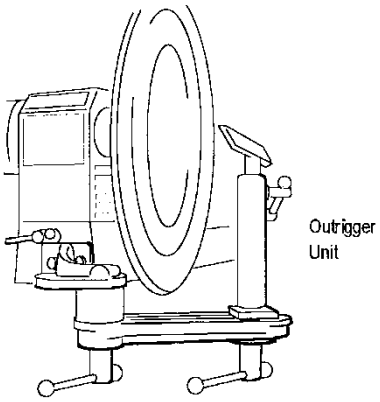
SFP80L (with side-locking function).
Faceplates are used to mount the work piece when faceplate turning bowls or platters. Faceplates are available in 80mm (3") diameter. A vacuum faceplate is also available. The 80mm (3") faceplate is made of solid steel. This faceplate has a small contact area to allow maximum freedom while shaping. It comes with 2 notches on the outside diameter for removing the faceplate from the spindle. This can be done with a light drift and mallet.



Accessories

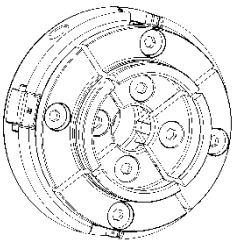
Outrigger Unit: 57073

Extend the bowl turning capacity of the Nova DVR 2024 Wood lathe to up to 798mm (31in.) in diameter. This unit is made from cast iron, is easy to position and control, and mounts to the headstock end of the lathe.



Precision Midi Chuck

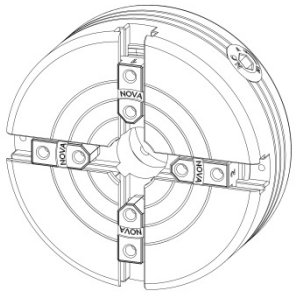
Ideal for mini, midi and all lathes up to 6" center height (12" diameter over bed) Can also be used for small work on large lathes.



NOVA Titan^2 Chuck

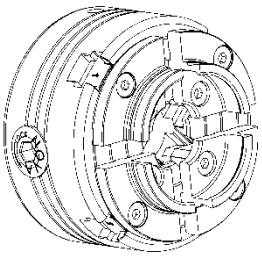
The Nova Titan^2 Chuck is a large solid chuck designed for use on large lathes and for larger projects.

This solid 5" diameter chuck with it's larger jaw capacity, and unique 3 hole jaw slide, is capable of handling much larger projects than the SuperNova^{2}Chuck.

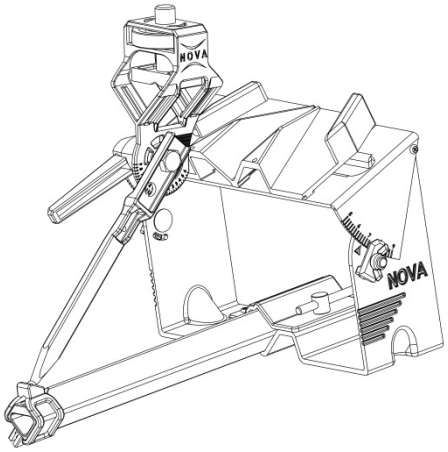


SuperNova^2 Chuck

Designed for the tough demands of modern woodturning. Body is precision machined from high quality K1045 machine steel. Gearing is heavy section, hardened steel to provide a powerful action. The greater holding strength, stability, and precision decreases vibration from small delicate turnings right up to large bowls and platters work (up to 29"/740mm)



NOVA Sharpening Centre The Nova Sharpening Centre attachment will transform your standard bench grinder into a precision grinding machine. The NOVA Sharpening Centre combines the slide way grinding jig and the powerful finger grind jig into one versatile sharpening tool.



For further details about the NOVA range of' lathe accessories, please contact your local retailer for more information, or contact us for a free product catalogue. This catalogue can also be downloaded from our website - at www.teknatool.com

Index

Accessories 45, 46, 47
Assembling 11

Bed - Lathe 2, 3, 9, 13, 14, 21, 22, 23, 33, 35,37,42,43

Camshaft 36, 37
Center less Turning 8, 23
Centers 8, 9, 23
Changing Speeds 28, 29, 30, 32, 33
Cleaning 36, 37
Components, 3, 8, 11
Connecting to Power, 17
Contents, 6

Distance between Centers, 9

Electrical 3, 7, 8, 9, 10, 17
Extension Bed, 12
Extension Cords, 10, 17

Faceplate, 2, 8, 9, 23, 24, 39, 45

Function, 3, 7, 18, 19, 20

Handles, 8, 11, 12
Handwheel, 9, 26, 41
Headstock, 2, 3, 8, 9, 10, 22, 23, 24, 36, 38

Lathe Stand Requirements, 10, 13
Live Center, 9, 38, 39, 45

Maintenance, 3, 36, 37
Mounting Faceplate or Chuck, 8, 23, 39
Mounting, Lathe, 2, 13, 14, 15, 39

Nova DVR 2024 Specifications, 9

Oil, 36, 37
Operating, 7, 8, 18
Operating Bar, 11, 24, 25
Outrigger Unit 9, 46

Parts List 43, 44
Power, 2, 3, 7, 8, 17, 18, 19, 20, 28, 29, 30, 31, 32, 33, 34, 35
Problems 39, 40, 41

Quill 8, 9, 26, 36, 37, 38, 39

Removing Centers and Tapers, 26
Revolving Center System, 45
Rpm, 3, 9, 19, 20, 21, 26, 28, 31, 32, 33, 39

Safety, 7, 8
Sanding, 8, 25
Shop Requirements, 10
Speed, 2, 3, 8, 9, 17, 18, 19, 20, 21, 26, 28, 31, 32, 33, 34, 39
Spindle Index, 2, 9, 19, 22, 23, 24, 30, 40
Spindle Threads,2, 9, 23
Spur Center, 8, 9, 24, 38, 39
Stand, 2, 9, 10, 11, 13, 14, 15, 16, 39, 41
Standard Equipment, 9
Swing, 9
Swiveling the Headstock, 22

Tailstock parts list, 42, 43, 44
Tailstock, 2, 8, 9, 11, 12, 14, 22, 26, 36, 37, 38, 41
Teknatool, 4, 5, 6, 24, 28, 31, 47, 49, 50
Toolrest, 9, 8, 11, 19, 25, 39, 45
Toolslide Parts List, 42, 43, 44
Troubleshooting, 39, 40, 41
Turning between Centers, 24
Turning Speeds, 26

Turning, 2, 3, 4, 7, 8, 21, 22, 23, 24, 25, 26, 27, 39, 40, 42, 43, 45, 46

Unpacking, 11

Vibration, 3, 13, 21, 39

Warranty, 49
Website, 5

Teknatool Warranty

Teknatool Five Year Limited Warranty (2 year on electrical parts)

This Teknatool product is backed by a warranty from the date of purchase. Teknatool International Ltd will repair or replace, at its expense and option, this Teknatool product which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to an authorized Teknatool service center with proof of purchase of the product within TWO YEARS and provides Teknatool with reasonable opportunity to verify the alleged defect by inspection. Teknatool will pay return product by most cost effective surface transport to customer. Any special freight services above this will be at customer cost. Furthermore, Teknatool International Ltd. extends this two-year period for three additional years, excluding labor costs and electrical parts, provided the aforementioned conditions are met. All electrical parts and electronics are covered by a TWO YEAR warranty from the date of purchase.

Teknatool will not be responsible for any asserted defect, which has resulted from normal wear, misuse, abuse, Power surges or excess voltage fluctuation, repair or alteration made by anyone other than an authorized service facility or representative. Under no circumstances will Teknatool International Ltd. be liable for incidental, special, indirect, and consequential damages or expenses, including loss of profits or loss of operations. This warranty is Teknatool International Ltd sole warranty. There are no other warranties, whether written or verbal, whether expressed or implied by law, trade, custom, or otherwise, whether of merchantability, fitness for purpose, or otherwise, except for remedies available to customers under the Consumer Guarantees Act or other legislation.

OVERSEAS CUSTOMERS: Our Teknatool Distributors and agents will issue their own warranty to cover this product. Terms may vary from those stated above; please check with your dealer. In North America warranty covers Continental USA only. For Alaska,Hawaii and other areas, warranty covers replacement of parts only and excludes transport costs.

Register your warranty faster with Teknatool online.

Visit our website on www.teknatool.com to register your warranty today!

Nova DVR 2024 Woodlathe Manual

116-0712-006

© Teknatool® International 2012
All rights reserved. Teknatool® USA Inc